San Francisco Maritime National Historical Park

National Park Service
U.S. Department of the Interior

San Francisco Maritime
National Historical Park
California

Environmental Assessment

Rehabilitate Failing Amphitheater Structure in Aquatic Park National Historic Landmark District

April 2006

ENVIRONMENTAL ASSESSMENT

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Prepared For:
National Park Service

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engineering-environmental Management, Inc.

San Francisco Maritime National Historical Park California

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Environmental Assessment
Rehabilitate Failing Amphitheater Structure in Aquatic Park National Historic Landmark District

San Francisco Maritime National Historical Park
San Francisco County, California

Summary

This environmental assessment examines in detail two alternatives: no action and the National Park Service preferred alternative. The preferred alternative considers rehabilitating the amphitheater structures, portions of which are currently being supported by temporary shoring, in Aquatic Park National Historic Landmark (NHL) District within San Francisco Maritime National Historical Park (NHP). The project would entail repair, and in some cases substantial reconstruction, of the severely deteriorated visitor-use bleachers, including the structure's accompanying underground offices and work spaces. Work would include removal and replacement of failed concrete and rebar in some areas, and shotcrete repair in other areas, installation of new waterproofing and drain system, replacement of skylights. The project could result in the removal of historic vegetation (i.e., cypress trees). The historically accurate landscape would be rehabilitated or restored in areas disturbed by the project, in accordance with the findings of the cultural landscape report to be completed in 2007. In addition, repairs would include upgrades for accessibility, and upgrades to facility mechanical and electrical systems to meet building codes. The purpose of the proposed project is to provide a safe and usable structure for visitors and park employees and to rehabilitate and protect the cultural resources of the building and the historic landmark district.

This action is needed because most of the amphitheater structure is in a severely deteriorated condition, making it potentially unsafe for visitors, San Francisco Senior Center members, and park staff that use the structure; deterioration has resulted in pieces of loosened concrete falling into the work spaces below the amphitheater; as the deterioration continues, the structure and associated work space would become unusable; and the structure has building code and life safety issues including inadequate ventilation, exits, fire sprinklers, and accessibility. A recent condition assessment by the National Park Service has determined the structure is unsafe and can no longer be maintained through use of stopgap measures or piecemeal repairs and if allowed to deteriorate, loss of this historically significant structure would occur.

The preferred alternative would have no or negligible impacts on vegetation, air quality, wildlife, threatened and endangered species and species of concern, designated critical habitats, ethnographic resources, archeological resources, water quality, wetlands, floodplains, Indian trust resources, prime and unique farmlands, land use, soundscape management, lightscape management, visual and scenic resources, designated critical habitat, ecologically critical areas, wild and scenic rivers, other unique natural areas, and environmental justice.

Short-term, negligible, adverse effects would occur to energy conservation and health and safety. Short-term, negligible to minor, adverse impacts would occur to museum collections. Short-term, minor, adverse impacts would occur to cultural landscapes, park operations, and soils. Short-term, minor to moderate, adverse impacts would occur to socioeconomics and transportation. Short-term, moderate, adverse impacts would occur to visitor use and experience. There would be no long-term impact to socioeconomics and soils. Long-term, negligible, adverse impacts would occur to transportation. Long-term, minor, beneficial impacts would occur to energy conservation. Long-term, minor to moderate, beneficial impacts would occur to archeological resources, museum collections, and cultural landscapes. Long-term, moderate, beneficial impacts would occur to historic structures and districts, visitor use and experience, health and safety, and park operations.

Notes to Reviewers and Respondents

If you wish to comment on the environmental assessment, you may mail comments to the name and address below. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials or organizations or businesses, available for public inspection in their entirety.

Please address comments to: Superintendent; San Francisco Maritime National Historical Park; Attn: Amphitheater Rehabilitation Project; Building E, Fort Mason Center; San Francisco, CA 94123; or via e-mail at: safr_planning@nps.gov

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ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
BAAQMD	Bay Area Quality Management District
CAAQS	California Air Quality Standards
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
GMP	General Management Plan
HVAC	Heating, Ventilation, and Air Conditioning
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHP	National Historical Park
NRHP	National Register of Historic Places
NPS	National Park Service
SHPO	State Historic Preservation Office
USC	United States Code
WPA	Works Progress Administration

INTRODUCTION

PURPOSE AND NEED FOR ACTION

The National Park Service (NPS) is considering rehabilitating the amphitheater structures, portions of which are currently being supported by temporary shoring, in Aquatic Park National Historic Landmark (NHL) District within San Francisco Maritime National Historical Park (NHP) (figure 1). The amphitheatre structure serves as outdoor seating, offices and workspaces, and is located on both sides of the Aquatic Park Bathhouse, also known as the maritime museum building. The project would entail repair, and in some cases substantial reconstruction, of the severely deteriorated visitor-use bleachers, including the accompanying underground offices and work spaces. Work would include removal and replacement of failed concrete and rebar in some areas, and shotcrete repair in other areas; installation of a new waterproofing and drain system, and replacement of the skylights. The project could result in the removal of historic vegetation (i.e., cypress trees). The historically accurate landscape would be rehabilitated or restored in areas disturbed by the project, in accordance with the findings of the cultural landscape report to be completed in 2007. In addition, repairs would include upgrades for accessibility, upgrades to facility mechanical and electrical systems to meet building codes, and repairs to the damaged historic first-aid station. The purpose of the proposed project is to provide a safe and usable structure for park employees and visitors and rehabilitate and protect the cultural resources of the building and historic landmark district.

This action is needed because:

- Due to age, water intrusion, general weathering, and exposure to the sea/salt environment, most of the amphitheater structure is in a severely deteriorated condition, making it potentially unsafe for visitors that use the structure.

- The deterioration has resulted in pieces of loosened concrete falling into the work spaces below the amphitheater. For most areas, ceiling tiles or a temporary corrugated metal roofing system catch the concrete pieces and prevent injury; however, this is a temporary measure and if the deterioration continues, these spaces would become unusable.

- A recent condition assessment by the National Park Service has determined the structure is unsafe and can no longer be maintained through use of stopgap measures or piecemeal repairs, and if allowed to deteriorate, loss of this historically significant structure would occur.

- There are building code and life safety issues with the structure including inadequate ventilation and exits, lack of appropriate number and spacing of fire sprinklers, and inadequate accessibility associated with the structure.

FIGURE 1. PROJECT AREA MAP

- Park offices, storage, work spaces beneath the amphitheater, and the San Francisco Senior Center would have to be relocated outside the park if deterioration continues and these areas become unsafe for use and storage. There are no additional spaces within the park to relocate these facilities.

An environmental assessment analyzes the preferred alternative and other alternatives and their impacts on the environment. This environmental assessment has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and regulations of the Council on Environmental Quality (40 *Code of Federal Regulations* (CFR) 1508.9); National Park Service Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*; and the National Historic Preservation Act of 1966 (as amended).

PARK PURPOSE, SIGNIFICANCE, AND MISSION

An essential part of the planning process is to understand the purpose, significance, and mission of the park for which this environmental assessment is being prepared.

National Historical Park Purpose

Purpose statements are based on legislation, legislative history, and NPS policies. The statements reaffirm the reasons for which the park was set aside as a unit of the national park system, and provide the foundation for the management and use of the park.

> *The purpose of San Francisco Maritime NHP is based on the legislation governing the National Park Service and legislation establishing the park, which is to "preserve and interpret the history and achievements of seafaring Americans and of the Nation's maritime heritage, especially on the Pacific Coast. . . ."*

National Historical Park Significance

Park significance statements capture the essence of the park's importance to the natural and cultural heritage of the United States. Significance statements do not inventory park resources; rather, they describe the park's distinctiveness and help place the area within the regional, national, and international context. Defining significance helps park managers make decisions that preserve the resources and values necessary to accomplish the purpose of the park.

> *The significance of San Francisco Maritime NHP is found in its collection of large vessels, small watercraft, artifacts, art, historic documents, books, and museum objects that are directly associated with the central role played by San Francisco Bay as the preeminent seaport in the maritime heritage of the Pacific Coast of the United States.*

The significance statement contains a number of listed items. Of those listed items, the significance statement that captures those resources of San Francisco Maritime NHP that could be potentially affected by the proposed project is summarized below as

> *". . .historic structures and settings associated with the history of the Bay and Black Point, such as the Aquatic Park Historic District (1929), which includes the Aquatic Park Bathhouse and associated public artwork, bleachers and basement spaces, concession stand and restroom buildings, east/west speaker towers, sea wall and Promenade, World War II army landing pier (now Sea Scout base), integrated landscape portions of Aquatic Park, the Aquatic Park lagoon and beach, and the Tubbs Cordage Company office building (Tubbs building [1860])" (NPS 1997a).*

National Historical Park Mission

The park's purpose describes the specific reason the park was established. Park significance is the distinctive features that make the park unique from any other. Together, purpose and significance lead to a concise statement—the mission of the park. The mission statement describes conditions that exist when the legislative intent for the park is being met.

> *The mission of San Francisco Maritime NHP is to preserve and interpret Pacific coast maritime history in its own context and its influence on world trade, in order to contribute to public appreciation and enjoyment (NPS 1997a).*

PROJECT BACKGROUND, PREVIOUS PLANNING, SCOPING, AND VALUE ANALYSIS

The visitor-use bleachers, part of the Aquatic Park Bathhouse, are used for viewing the popular Fourth of July fireworks display, as well as day-to-day use by park visitors and school groups. Both the east and west bleacher structures house work spaces for park facilities staff. The exhibit and photo departments are housed in the center bleacher structure. Through an agreement, the San Francisco Senior Center operates work spaces and classrooms in all three areas.

Previous Planning

The proposed project to rehabilitate the failing amphitheater structure in Aquatic Park NHL District complies with the primary management objectives for San Francisco Maritime NHP as stated in the approved *General Management Plan* (GMP) (NPS 1997a). GMP management objectives include:

- preserving, managing, and interpreting park cultural resources
- restoring altered and deteriorated resources for appropriate use

- providing equal access to programs, activities, and maritime experiences for individuals with disabilities, as appropriate and consistent with the levels of development and inherent levels of access within the park and its resources

- striving to make San Francisco Maritime NHP a model of excellence in sustainable design and management through such means as energy efficiency, conservation, compatibility with historic setting and architecture, recycling, accessibility, and the use of alternative energy sources consistent with the park's purpose

- encouraging appropriate use and adaptive reuse of historic structures while preserving historic integrity

- understanding, assessing, and considering the effects of park decisions outside park boundaries as well as inside

The GMP prescribes a cultural management zone for the area that includes the Aquatic Park NHL District, which encompasses the Aquatic Park Bathhouse and associated public artwork, bleachers and basement spaces, concession stand and restroom buildings, east/west speaker towers, sea wall, Sea Scout base, State Belt Line Railroad tracks, the integrated landscaped portions of Aquatic Park, Aquatic Park lagoon and beach, and a portion of Victorian Park.

As defined in NPS *Management Policies* (2001), this zone would include lands managed for preservation, protection, and interpretation of cultural resources and their settings, and for use and enjoyment by the public. Cultural resources that are key to the purposes of the park are included in this zone. Development in the cultural zone must be compatible with preservation and interpretation of cultural values. Consistent with policies for preservation and use of cultural resources, historic structures can be adaptively used for utilitarian or other purposes.

Scoping

Scoping is an effort to involve agencies and the general public in determining issues to be addressed in this environmental assessment. Scoping is used to:

- determine important issues to be given detailed analysis in the environmental assessment and eliminate issues not requiring detailed analysis

- allocate assignments among the interdisciplinary team members and/or other participating agencies

- identify related projects and associated documents

- identify permits, surveys, consultations, etc., required by other agencies

- create a schedule that allows adequate time to prepare and distribute the environmental assessment for public review and comment before a final decision is made

Scoping includes any interested agency, or any agency with jurisdiction by law or expertise (including the state historic preservation office [SHPO] and Indian tribes) to obtain early input.

Staff of San Francisco Maritime NHP and resource professionals of the National Park Service-Denver Service Center conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposed action to other planning efforts at San Francisco Maritime NHP.

A press release initiating scoping and describing the proposed action was issued on October 19, 2005 (appendix A). Comments were solicited during a public scoping period that ended February 27, 2006. Other agencies, organizations, and the public will have an opportunity to review and comment on this environmental assessment.

The National Historic Preservation Act, as amended (16 *United States Code* [USC] 470 *et seq*.), NEPA, National Park Service Organic Act, NPS *Management Policies* (2001), Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001), and Director's Order – 28: *Cultural Resources Management Guideline* require the consideration of impacts on cultural resources either listed in, or eligible to be listed in, the National Register of Historic Places (NRHP). The amphitheater structure is listed on the NRHP, and is part of the Aquatic Park NHL District. Accordingly, the staff at San Francisco Maritime NHP have been in consultation with the California SHPO. The National Park Service also notified the SHPO of the project by letter dated February 8, 2005. The letter invited the SHPO to send a representative to the value analysis for the project, which was conducted March 15–16, 2005. A copy of this environmental assessment will also be provided to the California SHPO for review and comment.

Value Analysis

A value analysis was performed during the concept phase of the project. The objective of the value analysis study was to examine alternatives for the elements of the project; to ensure that a wide range of alternative proposals was considered; to ensure that each element of the project satisfied the user's needs at the lowest life cycle cost while maintaining quality, reliability, sustainability, and function in the context of criteria that relates directly to NPS servicewide goals and objectives. In addition, under the analysis, the project had to comply with the requirements established for work within a national historic landmark building (BSA 2005).

The value analysis team examined eight alternatives for the east bleacher repairs, eight alternatives for the west/center bleacher repairs, eight alternatives for waterproofing, and five alternatives for skylights. These initial alternatives were then further reduced to four alternatives for the east bleacher repairs, four alternatives for the west/center bleacher repairs, and three alternatives for waterproofing using a "choosing by advantages" process. Four out of the five alternatives for skylights were eliminated during the choosing by advantages process because these alternatives could not be implemented in a cost-effective manner to meet the project purpose and need, leaving the remaining alternative to replace the existing skylights with new concrete skylights that match the existing ones. There was no further analysis of the skylight resolution issue (BSA 2005).

Following a detailed analysis, the value analysis team recommended the following treatments.

- East bleachers: The value analysis team recommended complete removal of the existing structure in the heavily damaged areas and patching the structure in lightly damaged areas. The group also recommended replacement of the entire horizontal waterproofing system.

- Center bleachers: The value analysis team recommended selective removal and replacement of the existing concrete structure at areas with heavy damage and patching at other, less heavily damaged areas. The group also recommended replacement of the entire horizontal waterproofing system.

- Vertical waterproofing: The team recommended that drilling occur through the existing retaining wall and urethane grout be injected into the soil at selected locations where leaking is evident.

ISSUES AND IMPACT TOPICS

Issues

Issues and concerns affecting this proposed action were identified from past NPS planning efforts and input from the public scoping efforts. The major issues are the conformance of the proposed action with the GMP (NPS 1997a) and potential impacts to soils, cultural landscapes, historic structures and districts, archeological resources, museum collections, visitor use and experience, health and safety, park operations, socioeconomics, transportation, and energy requirements and conservation potential.

Specific impact topics were developed for discussion focus and to allow comparison of the environmental consequences of each alternative. These impact topics were identified based on federal law, regulations, and executive orders; NPS *Management Policies* (2001); and National Park Service knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is given below, as well as the rationale for dismissing specific topics for further consideration.

Impact Topics Included in this Document

Soils

Under the preferred alternative, if necessary, soils would be excavated to allow drainage controls and water-proofing to be placed adjacent to the amphitheater structure to prevent additional water damage. Therefore, soils are addressed as an impact topic in this environmental assessment.

Cultural Landscapes

As described by the National Park Service *Cultural Resource Management Guideline* (Director's Order – 28), a cultural landscape is,

> *". . .a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use,*

> *systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions."*

The San Francisco Maritime NHP includes the Aquatic Park Historic District cultural landscape. The Aquatic Park became a national historic landmark on May 28, 1987.

Elements of the Aquatic Park NHL District include the Aquatic Park Bathhouse, Victorian Park, the landscape grounds, native or historic vegetation, spatial organization and relationship of associated buildings and landscape features, land use, circulation patterns, views and vistas, and the associated beach and lagoon.

The proposed rehabilitation of the bleacher structures would involve ground-disturbing activities that have the potential to affect native or historic vegetation. The existing cypress trees could be removed during excavation activities to install drainage controls. Impacts to native or historic vegetation will be addressed under impacts to cultural landscapes. Nonnative and nonhistoric vegetation will not be discussed.

There are cultural landscape features identified in the immediate area of Aquatic Park that could be affected by either alternative; therefore, cultural landscapes is addressed as an impact topic in this environmental assessment.

Historic Structures and Districts

The National Historic Preservation Act, as amended in 1992 and 2000 (16 USC 470 *et seq.*), NEPA, National Park Service Organic Act, NPS *Management Policies* (2001), Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001), and Director's Order – 28: *Cultural Resources Management Guideline* require the consideration of impacts on cultural resources, including historic structures, either listed in or eligible to be listed in the NRHP. This document will be submitted to the California SHPO for review and comment.

The Aquatic Park Bathhouse (now a maritime museum) and the associated amphitheater are listed on the NRHP and are contributing elements of the Aquatic Park NHL District. The bathhouse was built between 1936 and 1939 as a public bathhouse. The structure and associated features represent an important part of architectural and social history of the city. The national significance of the building lies in its overall design, which incorporates *streamline moderne* design elements. The building is an integrated mix of art and architecture with marine motifs and themes. When planned, the bathhouse was intended to be the focal point of the Aquatic Park. The building includes a four-story central block with the amphitheater structures, partially underground, to the east and west of it. In 1947, the San Francisco Senior Center moved into the east end and ground floor of the central block and into spaces beneath the central and western bleachers. The senior center represents the oldest, private, nonprofit senior center in the United States. In 1951, portions of the existing bathhouse structure were converted into a maritime museum. Both the no-action and preferred alternatives would affect the bathhouse and amphitheater structure; therefore, historic structures is addressed as an impact topic in this environmental assessment.

Archeological Resources

Archeological resources in the Aquatic Park NHL District have been identified by National Park Service studies (Kelly 1976, 1980). The lagoon at Aquatic Park was used in the 19th century as an anchorage for ships. The cove also contains rubble that was dumped following the 1906 earthquake. Some burned

items, including utensils, tools, bottles, coins, and nonorganic building materials, were encountered at the foot of Van Ness Avenue during construction in the 1970s. Other submerged archeological resources may include the remnants of a U.S. Army pier (ca. 1871) and a State Belt Railroad trestle (1914).

There is the possibility that artifacts related to the early building's construction, debris from the 1906 earthquake, or remains from a previously undocumented historic or prehistoric cultural resource could be uncovered during construction and/or during any earth disturbance. Although it is unlikely that significant intact deposits would be discovered during the proposed project, the possibility remains that previously unknown archeological resources could be affected by the preferred alternative; therefore, archeological resources is addressed as an impact topic in this environmental assessment.

Museum Collections

Museum collections include prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens. They may be threatened by fire, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventive conservation, supplemented by conservation treatment when necessary. The primary goal is preservation of artifacts in as stable condition as possible to prevent damage and minimize deterioration. Museum collections are housed in the storage areas beneath the amphitheater and in a shop where artifacts are used to develop museum exhibits. As such, both the no-action and preferred alternatives have the potential to impact museum collections; therefore, the topic of museum collections is addressed as an impact topic in this environmental assessment.

Visitor Use and Experience

Effects to visitor use and experience at the San Francisco Maritime NHP would be expected under both the no-action and preferred alternatives. The no-action alternative would result in eventual closure of the bleachers to visitors as well as the space beneath the bleachers currently used by the San Francisco Senior Center. Under the preferred alternative, during project construction, the bleachers would be closed. Visitor access would be limited on portions of the promenade area. During construction, groups who have traditionally used space within and around the amphitheater structure for various activities would be displaced. Some shade trees within the proposed project area would be removed, potentially impacting visitor experience in this urban park setting. Since both alternatives could impact visitor use and experience, this topic is addressed as an impact topic in this environmental assessment.

Health and Safety

The Aquatic Park Bathhouse structure, which includes the bleachers, has been found to be unsafe in its present condition, and continued use could affect the safety of all who access the area. In addition, under the preferred alternative, construction activities could impact safety. Asbestos is present in the structure requiring care during construction activities. Potentially hazardous materials in use by the park do not have adequate storage under current conditions and would require both temporary and long-term appropriate storage under the preferred alternative. Health and safety for NPS employees and the public could be affected by selection of either alternative; therefore, health and safety is addressed as an impact topic in this environmental assessment.

Park Operations

There would be effects on park operations from both the no-action and preferred alternatives. By not taking any action to repair existing facilities, park offices, exhibit storage, and the shop space these areas could eventually become unusable. Park employees would continue to make temporary repairs to the structure, and would eventually be required to barricade the space and monitor the area to ensure it is not being accessed. Under the preferred alternative, park offices, exhibit storage and shops, and employee parking would be displaced during the rehabilitation work. Therefore, the topic of park operations is addressed as an impact topic in this environmental assessment.

Socioeconomics

Both the no-action and preferred alternatives have the potential to affect socioeconomics. Doing nothing to correct the problems related to the amphitheater structure would eventually result in closure of the structure and spaces below, displacing groups that use this space including the San Francisco Senior Center. The proposed action under this environmental assessment would displace senior citizens and high school students who use the facilities that are to be rehabilitated. Permanent closure under the no-action alternative or temporary closure under the preferred alternative would disrupt the revenue stream generated by the rental of space in the amphitheater structure. Therefore, socioeconomics is addressed as an impact topic in this environmental assessment.

Transportation

The proposed action under this environmental assessment would be anticipated to impact transportation in the immediate vicinity of the project. Park employees, contractors and persons associated with the senior center regularly use the promenade for parking, and would be required to park in a new location. The promenade would no longer be available for parking upon completion of the project. In addition, the promenade would be closed to bicycles for the duration of the project, and the bus stop for Beach Street might be temporarily relocated. Therefore, transportation is addressed as an impact topic in this environmental assessment.

Energy Requirements and Conservation Potential

This impact topic addresses the general energy requirements and conservation potential of both the no-action and preferred alternatives. The energy usage of the amphitheater structure includes heating, cooling, and lighting requirements for operation of office space, shops, and public-use space. Large amounts of energy go into sustaining the deteriorating structure in a usable form. Rehabilitation of the structure offers opportunities to explore alternative approaches to achieve conservation potential and relieve the burden of sustaining the deteriorating structure. Therefore, energy requirements and conservation potential is addressed as an impact topic in this environmental assessment.

Impact Topics Dismissed from Further Analysis

Vegetation

The existing vegetation that could be impacted by the proposed action at the site consists of manicured lawn areas behind the bleacher structures in the skylight areas and along Beach Street. The manicured

lawns include vegetation that was planted in the soil covering the roofs of the offices beneath the bleachers. Grasses present likely include the turf grass Kentucky bluegrass (*Poa pratensis*) and other planted grasses. This area is principally grass covered and devoid of shrubs and other landscaping, except for three large cypress (*Cupressus* sp.) trees surrounding the east bleachers.

The proposed rehabilitation of the bleacher structures would involve ground-disturbing activities that have the potential to affect vegetation. Some trees would be removed during excavation activities to install drainage controls. Upon completion of the proposed project, the disturbed lawn area surrounding the historic bathhouse would be rehabilitated or restored using the original bathhouse landscape plan. Since the impacted vegetation is part of the Aquatic Park Historic District cultural landscape, impacts to vegetation will be addressed in detail under impacts to cultural landscapes since restoration of the historic vegetation and landscape is planned for the project. The project would not involve impacts to native vegetation or communities; therefore, vegetation is dismissed from further analysis in this environmental assessment.

Air Quality

Section 118 of the 1963 Clean Air Act (42 USC 7401 *et seq*.) requires a national park unit to meet all federal, state, and local air pollution standards. San Francisco Maritime NHP is a class II air quality area under the Clean Air Act, as amended. A class II designation indicates the maximum allowable increase in concentrations of pollutants over baseline concentrations of sulfur dioxide and particulate matter as specified in section 163 of the Clean Air Act. Further, the Clean Air Act provides that the federal land manager has an affirmative responsibility to protect air quality-related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse pollution impacts.

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to identify national ambient air quality standards to protect public health and welfare. Standards were set for the following pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants are designated criteria pollutants because the standards satisfy criteria specified in the act. An area where a standard is exceeded more than three times in three years can be considered a nonattainment area.

The California Clean Air Act of 1988, as amended, sets ambient air quality standards that are stricter than the federal standards, and requires local air districts to promulgate and implement rules and regulations to attain those standards. Under the act, California Ambient Air Quality Standards (CAAQS) are set for all pollutants covered under national standards, as well as vinyl chloride, hydrogen sulfide, sulfates, and visibility reducing particulates. If an area does not meet the CAAQS, it is designated as a state nonattainment area.

In 1993, the EPA adopted regulations implementing section 176 of the Clean Air Act as amended. Section 176 requires that federal actions conform to state implementation plans for achieving and maintaining the national standards. Federal actions must not cause or contribute to new violations of any standard, increase the frequency or severity of any existing violation, interfere with timely attainment or maintenance of any standard, delay emission reduction milestones, or contradict state implementation plan requirements. Federal actions that are subject to the general conformity regulations are required to mitigate or fully offset the emissions caused by the action, including both direct and indirect emissions that the federal agency has some control over.

San Francisco Maritime NHP is within the San Francisco Bay area air basin, which consists of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Napa, and Marin counties, as well as portions of Sonoma and Solano counties. The Bay Area Air Quality Management District (BAAQMD) is the air quality agency responsible for the entire basin. The BAAQMD monitors criteria pollutants continuously at stations located throughout the Bay Area.

Overall, air quality in the basin is better than in other urban areas of California despite widespread urbanization and extensive industrial and mobile source (vehicle) emissions. The Bay Area's coastal location and favorable meteorology help keep air pollution levels low much of the year, primarily due to the area's relatively cooler temperatures and ocean breezes; however, when temperatures are hot and there are no ocean breezes, levels of ozone and other pollutants can exceed federal and state air quality standards.

The San Francisco Bay Area is designated a federal nonattainment area for ozone and a state nonattainment area for ozone and inhalable particulate matter. Ozone is a principal component of smog. Ozone levels are highest in the Bay Area during days in late spring through summer when meteorological conditions are favorable for the photochemical reactions to occur, i.e., clear warm days and light winds.

The precursors for ozone are primarily generated by fuel combustion, and one of the primary sources of ozone in the San Francisco Bay area is mobile source emissions. Implementation of the preferred alternative would not be expected to increase visitation to the park and the related mobile source emissions.

Construction activities, including equipment operation and the hauling of material, could result in temporarily increased vehicle exhaust and emissions, as well as inhalable particulate matter. Construction dust associated with exposed soils would be controlled with the application of water or other approved dust palliatives. Also, dust-creating activities would be suspended when winds could create visible dust clouds that would affect sensitive receptors (homes, schools, hospitals). In addition, any hydrocarbons (NO_2, SO_2 emissions), as well as airborne particulates created by fugitive dust plumes, would be rapidly dissipated because the location of the park and prevailing winds permits good air circulation. Overall, there could be a local, short-term, negligible degradation of air quality during construction activities; however, no measurable effects outside the immediate construction site would be anticipated. Any construction-related, adverse effects to air quality would be temporary, lasting only as long as construction.

Since there is known asbestos-containing materials in the structures to be rehabilitated, the BAAQMD would be notified and appropriate work practice requirements would be developed to prevent the emission of asbestos into the atmosphere. The work practice requirements would specify appropriate removal, handling, clean-up procedures, and time schedules, as well as the appropriate storage, disposal, and landfill requirements for asbestos-containing waste materials. All contractors would be required to maintain records, including waste shipment records, and would be required to use appropriate warning labels, signs, and markings.

None of the proposed actions in the environmental assessment would violate any air quality standard or result in a cumulatively net increase of any criteria pollutant for which the Bay Area is in nonattainment under federal or state ambient air quality standards. Implementation of the preferred alternative would have negligible effects on air quality, and San Francisco Maritime NHP's class II air quality would be unaffected. Therefore, air quality is dismissed from further analysis in this environmental assessment.

Wildlife

National Park Service policy is to protect the components and processes of naturally occurring biotic communities, including the natural abundance, diversity, and ecological integrity of plants and animals (NPS 2001a). Because the project is located in a highly developed urban setting, the area does not support suitable wildlife habitat and minimal wildlife activity is expected. Some small rodents and insects may be present and birds may be transitory to the area. Impacts to wildlife from the construction activities associated with the preferred alternative are expected to be short term and negligible. Once construction is completed, there would be no long-term impacts to wildlife; therefore, this impact topic is dismissed from further analysis in this environmental assessment.

Threatened and Endangered Species and Species of Concern

The Endangered Species Act (1973), as amended, requires an examination of impacts on all federally listed threatened or endangered species. NPS policy also requires examination of the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service were contacted to request lists of any threatened or endangered species or species of concern or habitat potentially occurring within the vicinity of the proposed project. National Marine Fisheries Service responded in a letter dated August 12, 2005, that since there is no shoreline or in-water construction work associated with the proposed activities, the project would have no effect on listed salmonoids that may be present in adjacent waters at the time of construction or on their critical habitat (appendix B).

The U.S. Fish and Wildlife Service verbally responded with a Web site link to a listing of special-status species by U.S. Geological Survey quadrangle location. A list of species was obtained from the Web site (USFWS 2005) (appendix B). Based on a review of the listed species provided by the U.S. Fish and Wildlife Service, none of the species are known to occur in the park. Therefore, the proposed construction activities would not impact special-status species. The amphitheater area is heavily developed and occupied by the museum building, access features, parking areas, and limited landscaping. It does not support rare plant species or their habitat. Additionally, there is moderate to high human presence as visitors tour the facility, including the beach access. The urbanized development and level of human activity would deter use by special-status wildlife species. Therefore, this impact topic is dismissed from further analysis in this environmental assessment.

Water Quality

The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters; to enhance the quality of water resources; and to prevent, control, and abate water pollution. NPS *Management Policies* provide direction for the preservation, use, and quality of water in national park units. Any potential water quality impacts as a result of the proposed construction activities associated with the preferred alternative would be mitigated through the use of best management practices for control of runoff and sediment. As a result, short-term impacts to water quality would be negligible. Therefore, this impact topic is dismissed from further analysis in this environmental assessment.

Wetlands

Executive Order 11990 (*Protection of Wetlands*) requires an examination of impacts to wetlands. The park lies along the San Francisco Bay shoreline, which has been altered by development of structures, piers, and breakwaters. A narrow strip of beach rims the shoreline within the lagoon area formed by the Municipal and Hyde Street piers. There are no stream or creek outlets along the shoreline within the park (NPS 1997a). There are no jurisdictional or NPS-defined wetlands within the project area. Therefore, the topic of wetlands is dismissed from further analysis in this environmental assessment.

Floodplains

Executive Order 11988 (*Floodplain Management*) requires an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. NPS *Management Policies*, Director's Order – 2: *Planning Guidelines*, and Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* provide guidelines for proposed actions in floodplains. The Federal Emergency Management Administration indicates the area surrounding San Francisco Maritime NHP is unmapped for floodplains (FEMA 2005). The project area is located immediately adjacent to San Francisco Bay; however, the structures are located above the areas typically affected by wave and tidal action. The park knows of no floodplains within the project area; therefore, floodplains is dismissed from further analysis in this environmental assessment.

Ethnographic Resources

The National Park Service defines ethnographic resources as any

> *"site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it"* (DO – 28: *Cultural Resource Management Guideline,* p. 191).

American Indians known as Costanoans lived on the San Francisco peninsula for thousands of years before the first Europeans arrived. The Spanish used the native population as slave labor and many died of disease. Experts believe that about 80% of the Costanoans died during this period. Today, the descendants of the Costanoan people from the Bay Area are known as the Muwekma tribe or Ohlone (NPS 1997a). No ethnographic resources are known to exist in or in proximity to the project area; therefore, ethnographic resources is dismissed from further analysis in this environmental assessment.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United Sates to protect tribal lands, assets, resources, and treaty rights, and represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. There are no Indian trust resources in San Francisco Maritime NHP. The lands comprising the park are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, the topic of Indian trust resources is dismissed from further analysis in this environmental assessment.

Prime and Unique Farmlands

In 1980, the Council on Environmental Quality directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the United States Department of Agriculture, Natural Resources Conservation Service. Prime or unique farmland is defined as soil, which particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. The project area is located in a highly developed and densely populated area, in an urban environment where soils have been extensively disturbed; therefore, prime and unique farmlands is dismissed from further analysis in this environmental assessment.

Designated Critical Habitat, Ecologically Critical Areas, Wild and Scenic Rivers, Other Unique Natural Areas

No areas within the project corridor are designated as critical habitat or ecologically critical, nor are there any existing or potential wild and scenic rivers within the project area (NPS 2005b). This topic is, therefore, dismissed from further analysis in this environmental assessment.

Environmental Justice

Presidential Executive Order 12898 (*General Actions to Address Environmental Justice in Minority Populations and Low-income Populations*) requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the EPA, environmental justice is the:

> ". . .fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

The goal of "fair treatment" is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

San Francisco, California, contains both minority and low-income populations and communities; however, environmental justice is dismissed from further analysis for the following reasons:

- The actions of the preferred alternative would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population or community.
- The impacts on the natural environment that would occur due to the preferred alternative would not disproportionately affect any minority or low-income population or community.
- The preferred alternative would not result in any identified effects that would be specific to any minority or low-income community.

- Any adverse impacts to the socioeconomic environment due to the preferred alternative would be short term and minor. In addition, the park staff and planning team do not anticipate impacts to the socioeconomic environment to alter in any way the physical and social structure of nearby communities.

Environmental justice is, therefore, dismissed from further analysis in this environmental assessment.

Lightscape Management

In accordance with NPS *Management Policies* (2001), the National Park Service strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. Due to its highly urbanized setting, the preservation of natural ambient lightscapes is not an objective of San Francisco Maritime NHP. The park would strive, however, to limit the use of artificial outdoor lighting that which is necessary for basic safety requirements, and to ensure that all outdoor lighting is shielded to the maximum extent possible, to focus light on the intended work area and away from the night sky, so as to minimally contribute to surrounding light sources of the city and greater Bay Area. Thus, lightscape management was dismissed from further analysis in this environmental assessment.

Land Use

The park is on the eastern edge of a nearly continuous band of waterfront open space that is adjacent to San Francisco Bay. The Fisherman's Wharf area is comprised of a combination of maritime and fishing-related uses, as well as retail, restaurant, and entertainment services (NPS 1997a). Neither the no-action or preferred alternatives would change local or regional land use; therefore, land use is dismissed from further analysis in this environmental assessment.

Visual Resources

Visual resources could be affected by the proposed project; however, the effects would be short term, localized, and negligible. The preferred alternative would rehabilitate the existing amphitheater structures in Aquatic Park, and would not change the existing design of the structures. Visual impacts would occur during construction to areas adjacent to the construction zone. During construction, effects would result from the presence of temporary fencing, construction equipment, and dust, but the effects would be short term and occur within the construction zone. Therefore, the topic of visual resources is dismissed from further analysis in this environmental assessment.

Soundscape Management

In accordance with NPS *Management Policies* (2001) and Director's Order – 47: *Sound Preservation and Noise Management*, an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequency, magnitude, and duration of human-caused sound considered acceptable varies among NPS units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

San Francisco Maritime NHP is in a highly urbanized area where the protection of a natural ambient soundscape and/or the opportunity for visitors to experience natural sound environments is not an objective of the park. Visitors would not come to the park to see the quieter intermittent sounds of nature. Any construction associated with implementation of the alternatives, e.g., the hauling of material or the operation of construction equipment, could result in dissonant noise, but these sounds would be temporary and not unlike the heavy traffic noise associated with a busy commercial area. Because protection of a natural ambient soundscape and/or opportunity for visitors to experience natural sound environments is not an objective of the park, soundscape management is dismissed from further analysis in this environmental assessment.

ALTERNATIVES

INTRODUCTION

The alternatives section describes two management alternatives for the rehabilitation of the failing amphitheater structures in Aquatic Park NHL District at San Francisco Maritime NHP.

The no-action alternative describes the action of continuing the current management operations and conditions and does not imply or direct discontinuing the present action or removing existing uses, developments, or facilities. The no-action alternative provides a basis for comparing the management direction and environmental consequences of the preferred alternative. Should the no-action alternative be selected, the National Park Service would respond to future needs and conditions associated with amphitheater structures in Aquatic Park at San Francisco Maritime NHP without major actions or changes in course.

The preferred alternative presents the NPS proposed action and defines the rationale for the action in terms of resource protection and management, visitor and operational use, and other applicable factors.

Additional alternatives considered and dismissed from detailed analysis are also discussed in this section. A summary table comparing the environmental consequences of each alternative is presented at the end of the alternatives section.

ALTERNATIVE A: NO-ACTION ALTERNATIVE

The no-action alternative would continue the existing conditions of the amphitheater structures in Aquatic Park NHL District within San Francisco Maritime NHP. The amphitheater structure would not be rehabilitated. Unsafe conditions in terms of holes in the public use areas of the bleachers and concrete falling into the work spaces beneath the amphitheater would continue. The hazardous material storage room would continue to have inadequate ventilation to meet current standards. The Americans with Disabilities Act (ADA) and other code requirements would not be met. Water would continue to penetrate the concrete of the amphitheater structure, and as a result, the structure would continue to deteriorate. Temporary wooden shoring put in place to allow continued public use of the east bleachers would eventually be compromised. The amphitheater structures would eventually be closed to the public and the space beneath the amphitheater would no longer be safely usable for offices, storage space, work space, or as a home to the San Francisco Senior Center. The historic first-aid station would continue to deteriorate due to water infiltration.

Should the no-action alternative be selected, the National Park Service would respond to future needs and conditions associated with the failing amphitheater structures without major actions or changes in the present course. The no-action alternative does not preclude short-term, minor repair or improvement activities for the amphitheater structures that would be a part of routine maintenance for continuing operation of Aquatic Park. No major repairs would occur, and over time routine maintenance would not sustain the structures.

ALTERNATIVE B: PREFERRED ALTERNATIVE

Alternative B is the NPS preferred alternative. The preferred alternative presents the NPS proposed action and defines the rationale for the action in terms of resource protection and management, visitor and operational use, and costs. The preferred alternative meets the San Francisco Maritime NHP planning objective of providing safe and adequate visitor facilities, park offices, and shop areas within the NHP while preserving this national historic landmark.

GENERAL DESCRIPTION OF AMPHITHEATER REHABILITATION WORK

The project would provide rehabilitation of the severely deteriorated visitor-use bleachers, including the accompanying underground offices and work spaces (figure 2). Construction work would entail removal and replacement of failed concrete and rebar; shotcrete repairs to concrete; installation of new underground drainage controls and structure waterproofing system; hazardous materials removal; upgrading the heating, ventilation, and air conditioning (HVAC) system, electrical lighting, power, communication, and fire protection systems; and replacement of the skylights. In addition, the rehabilitation would include upgrades for accessibility.

The project could result in the removal of historic vegetation (i.e., cypress trees). The historically accurate landscape would be rehabilitated or restored in areas disturbed by construction, in accordance with the findings of the cultural landscape report to be completed in 2007.

The rehabilitation work would result in closure of the bleachers and associated office and work spaces. The promenade would continue to be open to pedestrian traffic only, except for short periods of time when, for safety reasons, the promenade would be closed to all traffic. Temporary closures of the promenade to pedestrians, lasting up to several hours, may occur routinely throughout the project. Short-term closures of the maritime museum would be required for some of the mechanical and electrical rehabilitation work.

COMPLETE DEMOLITION AND REBUILD (EAST BLEACHERS ONLY)

The east bleachers are in the most deteriorated condition and would require complete removal of some sections with repair of other sections (figure 3). Rehabilitation of the east bleachers would include removal of a portion of the bleacher structure. It is anticipated that approximately 80% of the east bleachers would be demolished and rebuilt with a new concrete structure, while maintaining the architectural features of the original structure. The portion to be replaced is approximately from the mid-section to the promenade. The new portion would be doweled to the remaining existing structure (BSA 2005).

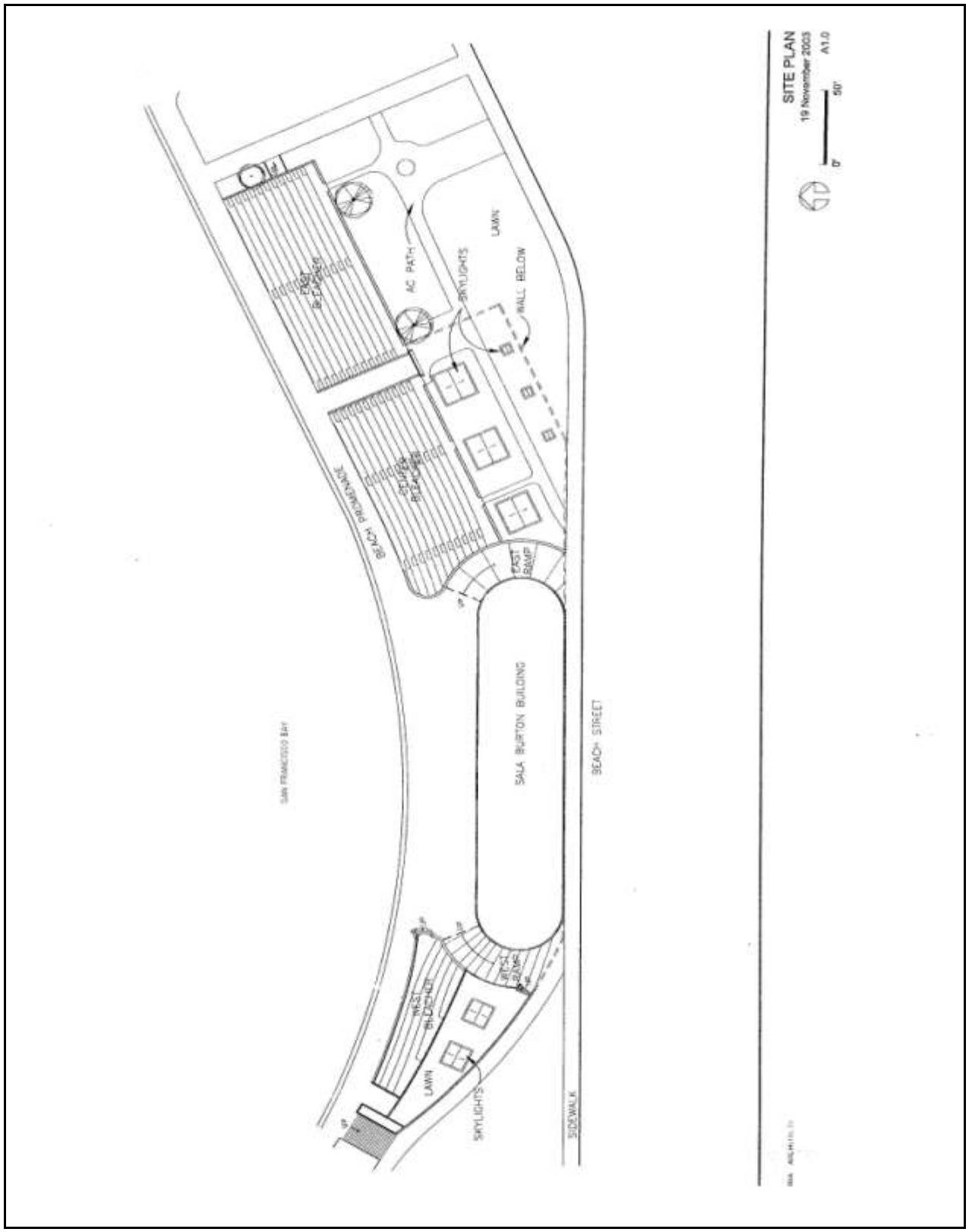

FIGURE 2. SITE PLAN

FIGURE 3. EAST AND CENTER BLEACHERS

REPAIR WORK

Rehabilitation of the center and west bleachers (figure 4) and portions of the east bleachers would include repair of all structurally deteriorated bleacher slabs, support beams, stairs, and seating components. Construction work would include selective replacement of major damaged areas and patching of the rest. The existing concrete topping slabs would be removed to permit evaluation and repair of the concrete structures beneath. When these topping slabs are removed, the horizontal waterproofing system would be removed and replaced (see discussion in the "Waterproofing and Drainage Controls" section below). The topping slabs would be replaced upon completion of the repairs and installation of the new horizontal waterproofing (BSA 2005).

For shotcrete repairs, the existing structures would be temporarily shored and the loose and deteriorated concrete would be removed. Rebar would be sandblasted unless it has deteriorated to the point where the integrity of the structure is compromised. In those cases, the rebar would be removed and replaced. Shotcrete would then be applied to bring the

FIGURE 4. VIEW OF WEST BLEACHERS

structure back to its original cross section. Girders would be strengthened in a similar manner and columns would be patched or replaced, depending on the extent of the damage (BSA 2005).

In areas where damage is localized, the loose and deteriorated concrete material would be removed. Rebar would be sandblasted unless it has deteriorated to the point where the integrity of the structure is compromised, in which case it would be removed and replaced. The concrete would be patched with a nonshrink, nonmetallic, high strength grout (BSA 2005).

Repairs to Offices and Work Spaces

The area beneath the bleachers would also undergo renovation. The HVAC systems, electrical lighting, power, and fire protection systems would be upgraded. Hazardous materials would be removed including asbestos piping and a boiler. Unused fuel oil tanks would also be removed and properly disposed. A new hazardous materials storage room would be constructed as part of the structure. The new storage room would include proper ventilation. Ventilation would also be upgraded in other areas including the east shop hood area, restroom facilities, darkrooms, grinder and machine shops, and other areas not currently ventilated. Electrical systems would be upgraded. New distribution panels would be provided where necessary (BSA 2005).
Plumbing systems would be upgraded at each restroom. Additional emergency eyewash stations would be added in appropriate locations in the hazardous materials storage room and the shop areas. Fire sprinklers would be added to areas that are not currently covered under a fire suppression system (BSA 2005).

Modification of the office and work spaces would be designed to meet ADA and code requirements with installation of new hardware and wheelchair ramps (for disabled access), and would be in keeping with the historic character of the structure. Restroom facilities would also be upgraded to include wheelchair accessibility.

The area under the bleachers houses the historic first-aid station for Aquatic Park. The rehabilitation project would halt water infiltration into the area, and falling ceramic tile would be repaired.

Waterproofing and Drainage Controls

The bleacher retaining walls also experience water infiltration that leaks into the office and work spaces below the bleachers. New vertical waterproofing would be installed for any bleacher areas where the retaining wall would be exposed as part of the construction activities (most likely only in certain areas of the east bleacher structure). For areas where exposure of the retaining wall is not required, holes would be drilled from the interior of the retaining walls into the soil behind the walls. The holes would be injected with a urethane grout to stop the water infiltration (BSA 2005).

Additional waterproofing would be installed at the vertical construction joint between the east and center bleachers with a self-adhering waterproofing membrane applied from the exterior side of the wall. If necessary, the existing landscape and fill would be removed from this exterior area to expose the wall and permit installation of waterproofing. The root system for a large cypress tree in this area may be contributing to the water infiltration and may be removed as part of the renovation.

The 70-year-old horizontal waterproofing would also be replaced on the bleacher platform and steps and on the roof over the occupied space beneath the bleachers (where the skylights are located). Once the topping slabs are removed, the existing waterproofing would be removed and new waterproofing would be installed. The existing waterproofing used asbestos reinforced roofing felts, so additional protective measures may be necessary during removal of the old waterproofing. Once the old waterproofing is removed, a new layer of waterproofing would be installed. Above the new waterproofing layer, a drainage layer would be installed and then a new concrete topping slab.

Skylight Replacement

Skylights exist to allow natural light into the work spaces and offices beneath the center and west bleachers. The skylights are old and deteriorated. The original steel frame support structure with glass block is a flat design and is susceptible to water infiltration. As a result, restoration of the skylights in the same manner may not correct water leaking problems. The skylights would be removed and replaced with new concrete skylights that match the historic ones. The new skylights would be designed to be installed in heavy traffic areas and therefore the existing nonhistoric guardrails could be removed (BSA 2005) (figure 5).

FIGURE 5. EXISTING SKYLIGHTS WITH PROTECTIVE GUARDRAILS

Landscaping

The existing landscape, lawn areas, and path would be partially disturbed as part of the bleacher rehabilitation and horizontal waterproofing of the roof of the underground areas. It is anticipated that the three large cypress trees around the east bleachers would have to be removed, or would die from the impacts of construction. Following completion of the rehabilitation work on the bleacher structures, the lawn area above the west bleachers and surrounding the skylights in that vicinity, as well as the lawn areas and trees immediately adjacent to the center and east bleachers, would have landscaping restored. The landscaping and replacement of the path would be guided by the cultural landscape report to be completed in 2007, and may be in accordance with the landscape plan included in the original 1938 *Plan of Aquatic Park* (Punnett 1938), or at least in a similar form and character. Replacement of the cypress trees as part of the historic landscape would be determined upon completion of the cultural landscape report in 2007.

Staging Area

An area of the promenade adjacent to the bleachers would be closed, fenced, and used for staging construction materials during the rehabilitation process. Demolition debris would be loaded onto trucks for removal from the site.

GENERAL CONSTRUCTION SCHEDULE AND COST

The expected construction costs are estimated to be approximately $7,151,000 (Davis Langdon 2005). The period of construction is scheduled to begin the spring of 2008, and continue through approximately the fall of 2009. Construction work would occur during daylight hours. No construction would occur during the night time or on weekends or holidays, unless necessary for safety.

MITIGATION MEASURES OF THE PREFERRED ALTERNATIVE

Mitigation measures are presented as part of the preferred alternative. These actions have been developed to lessen the adverse effects of the preferred alternative.

Resource Area	Mitigation
General Considerations	The NPS project manager would ensure that construction activity remains confined within the parameters established in compliance documents and that mitigation measures are properly implemented.
	Construction zones would be identified and fenced before beginning the activity and all disturbances would be confined to the fenced areas. All project personnel would be instructed that their activities must be confined to locations within fenced areas. Disturbance beyond the fenced construction zone would be prohibited.
	All fencing, tools, equipment, barricades, signs, surplus materials, and rubbish would be removed from the project work limits upon project completion. Any surfaces or walkways damaged due to work on the project would be repaired to original condition. All demolition debris would be removed from the project site, including all visible concrete and metal pieces.
	A hazardous spill plan would be in place, stating what actions would be taken in the case of a spill and preventive measures to be implemented such as storage and handling of hazardous materials, etc.
General Considerations	All equipment on the project would be maintained in a clean and well-functioning state to avoid or minimize contamination from automotive fluids; all equipment would be checked daily.
	Staging for construction vehicles and equipment would be located in an area of the promenade, and would be clearly identified in advance.
Air Quality	Idling of construction vehicles would be limited to reduce construction equipment emissions.
	Construction dust associated with exposed soils would be controlled with the application of water or other approved dust palliatives.
	Dust-creating activities would be suspended when winds are too great to prevent visible dust clouds from affecting sensitive receptors.

Resource Area	Mitigation
Air Quality	Appropriate work practices would be developed to prevent the release of asbestos into the atmosphere. The work practices would specify appropriate removal, handling, clean-up procedures, and time schedules, as well as the appropriate storage, disposal, and landfill requirements for asbestos-containing waste materials.
	All contractors handling asbestos materials would be required to maintain records, including waste shipment records, and would be required to use appropriate warning labels, signs, and markings.
	Sand blasting would be accomplished using sponge blast systems, or within temporary containment systems (Bell 2006) to minimize particle emissions into the atmosphere.
Water Quality	Best management practices, as identified and utilized by the National Park Service, would be used for sediment control during construction to avoid potential impacts to water quality. Sediment-control measures could include silt fencing, temporary earthen berms, sediment traps, erosion check structures, and/or filters. Any stockpiled soil material would have sediment-control measures placed around the perimeter.
	Regular site inspections would be conducted during the construction period to ensure that sediment-control measures were properly installed and are functioning effectively.
Soils	Soil removed and stockpiled to access the retaining walls and roofing would be kept in a moistened condition in order to avoid blowing dust. As soon as work is completed, the soil would be backfilled to the approximate original contour.
Archeological Resources	During excavation of the landscaped areas, the park intends to have an archeologist onsite to watch for any archeological indications of original planting bed configurations—including pathways (particularly around the light wells) and the location of vegetation/beds previously removed.
	Although unlikely, should unknown archeological resources be uncovered during construction, work would be halted in the discovery area, the site secured, and San Francisco Maritime NHP would consult according to 36 CFR 800.13 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990. In compliance with the Native American Graves Protection and Repatriation Act of 1990, the National Park Service would also notify and consult representatives of American Indian tribes likely to be culturally affiliated with the project area for the proper treatment of human remains, funerary, and sacred objects should these be discovered during construction.
Cultural Landscapes	The project would restore the historically accurate landscape, or rehabilitate the landscape to a similar form and character, if possible, in areas disturbed by the project. This would be done in accordance with the findings of the cultural landscape report to be completed in 2007.
Historic Structures	The rehabilitation project would be designed to maintain the historic character of the structures.
	All work on the historic structures would conform to the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (1983). The guidelines pertain to historic buildings of all sizes, materials, occupancy, and construction types; and apply to interior and exterior work as well as new exterior additions. The standards include guidance for repair, replacement of existing features and missing historic elements, alterations and additions, and accessibility considerations.
Museum Collections	All museum collections that could be impacted by project activities would be moved from areas of construction and stored in a safe area, potentially offsite, until construction activities have been completed.

Resource Area	Mitigation
Visitor Use and Experience	Historic ships would continue to be available for rent for special events.
	During the project, the promenade would remain open to pedestrians, except for occasional short periods of time when it would be closed due to construction work that could encroach on the promenade or threaten pedestrian safety.
	The public would be informed about the construction schedule and any potential delays through updates in the newsletter and Web site, notification to the visitor's bureau, postings in the maritime museum windows, and notification to local businesses.
Health & Safety	Before commencing project activity, construction zones would be fenced to exclude public access and exposure to construction hazards, and all construction hazards would be confined to the fenced areas.
	The park would collaborate with the fire department to plan for emergency response alternatives to the promenade during times of limited access.
Park Operations	Park offices would be required to relocate for the duration of the project. Park offices would either be relocated in the maritime museum building, in Building E, or at park headquarters, located in Building E, Lower Fort Mason.
Socioeconomics	The senior citizens who use the space under the bleachers, and the high school that uses the bleachers for physical education classes would be notified at least six months in advance of the project so that other arrangements could be made for continuation of activities during facility closure.
Transportation	The contractor would be required to prepare a traffic management plan for review by the National Park Service that includes designated travel routes, delivery times, and safety measures.
Energy Requirements and Conservation Potential	Use of recycled materials, and energy conserving and environmentally sustainable design would be incorporated into the project, as appropriate.

Sustainability

The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design park facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity; to construct and retrofit facilities using energy-efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment.

Given that the purpose of the proposed project is to provide a safe and usable structure for park employees and visitors, and to rehabilitate and protect the cultural resources of the building and historic landmark district, the preferred alternative subscribes to and supports the practice of sustainable planning, design, and use of the amphitheater structures. Energy efficiency would be incorporated into any decision-making process during the design or acquisition of structures, as well as all decisions affecting park operations. The use of value analysis and value engineering, including life-cycle cost analysis, was performed to examine energy, environmental, and economic implications of the proposed action. In addition, San Francisco Maritime NHP encourages suppliers, permittees, and contractors to follow sustainable practices.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director's Order 12, the National Park Service is required to identify the "environmentally preferred alternative" in all environmental documents, including environmental assessments. The environmentally preferred alternative is determined by applying the criteria suggested in NEPA, which is guided by the Council on Environmental Quality. The Council on Environmental Quality provides direction that "[t]he environmentally preferred alternative is the alternative that will promote the national environmental policy as expressed in section 101 of NEPA, which considers:

1. fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations

2. assuring for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings

3. attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences

4. preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice

5. achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities

6. enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources" (NEPA, section 101)

The no-action alternative is not the environmentally preferred alternative because it would not:

- prevent further deterioration of the historic amphitheater structure (criteria 1, 3, and 4)
- provide safe and healthy facilities for park employees and the public (criterion 2)
- provide universal access to restroom facilities (criterion 2)
- allow continued use of the amphitheater structure because over time the deteriorated condition would result in closure (criteria 2 and 5)

The environmentally preferred alternative in this environmental assessment is the NPS preferred alternative. This alternative was selected based on the following criteria:

- protects the cultural resource for future generations (criteria 1 and 4)
- improves operational efficiency and sustainability by rehabilitating the structure to a sustainable standard, reducing the resources needed to address the declining condition of the structure (criteria 1 and 6)
- provides safe and healthy facilities for park employees and the public (criterion 2)
- promotes energy conservation through upgrades to various mechanical and electrical components (criterion 6)

In short, this alternative would provide protection of employee and visitor health and safety, protect this important historic structure, and improve day-to-day operations.

Alternatives Considered But Dismissed

Permanent closure of the facility was considered as a possible alternative to rehabilitation of the amphitheater structure. However, the bleachers area comprises such a popular gathering place that when the park was forced to temporarily close the area for testing and engineering, the local newspaper, the *San Francisco Chronicle*, featured the closure in its daily "Chronicle Watch" article noting how many days the structure had been closed. Reporters from other areas continually called the park for daily information (NPS 2004). In addition, the park is located in the very urban area of San Francisco's Fisherman's Wharf. Space of any kind is at a premium. There are no other facilities within the park or nearby where park staff can establish offices and workshops to support core park missions and functions. This alternative was dismissed because it would result in an adverse impact to the cultural resource, and would not meet the purpose and need of the project.

Other alternatives that were evaluated included construction of permanent shoring beneath the existing structure with continued use of the existing bleachers, construction of new bleachers over the existing structure after installation of permanent shoring, and patching damaged portions using carbon fiber in heavily damaged areas without replacement or the use of shotcrete. Construction of shoring and continued use of the existing bleachers would not eliminate water infiltration and, as a result, the deterioration would continue. Construction of permanent shoring and placement of new bleachers would not preserve the historic fabric of the bleachers and would change the appearance, having a negative impact on the cultural resource. Patching only would be more expensive and would not provide any advantage over the use of shotcrete (BSA 2005).

As part of the value analysis study a number of different alternatives were evaluated for repair to the structures, including complete removal and replacement of the bleacher structure; and various combinations of removal and replacement, shotcrete repair, and patching. Complete removal and replacement was dismissed for all but the most heavily damaged portions of the east bleachers in order to retain as much of the historic fabric of the structure as possible. The preferred alternative was selected based on optimization of the replacement work, shotcrete repair work, and patching work.

Alternatives were also evaluated for the vertical waterproofing systems including complete and partial external replacement, installation of a slurry wall, interior wall treatment, and internal collection of water seepage. Complete or partial external replacement would require excavation to expose the wall and would result in extensive disturbance. Installation of a slurry wall is similar to the selected soil grouting, but is cost prohibitive. Interior wall treatment would destroy the existing historic wall finishes. Internal collection of water seepage would not solve the problems associated with water leaking into work spaces.

A number of alternatives were also evaluated for the skylights, including repair of the existing skylights, and removal of the skylights. Repair of the existing skylights would not provide long-term waterproofing, and elimination of the skylights would change the historic character of the structure. Both were dismissed from further consideration.

Alternatives Comparison Table

No-Action Alternative	Preferred Alternative
The no-action alternative would continue the existing conditions for the amphitheater structure and associated offices and work spaces in the Aquatic Park	The project would provide for the rehabilitation of the severely deteriorated visitor-use bleachers, including the accompanying underground offices and work

No-Action Alternative	Preferred Alternative
NHL District within San Francisco Maritime NHP. The amphitheater structure would not be rehabilitated, unsafe conditions would persist, and the structure would continue to deteriorate. Ultimately, the structure would no longer be usable.	spaces. The heavily damaged portions of the east bleachers would be demolished and reconstructed. The remainder of the east bleachers would receive repairs, as needed. The center and west bleachers would receive shotcrete repairs and additional patching, as necessary. Work would also entail installation of new horizontal waterproofing; soil grouting to eliminate seepage; removal of asbestos-containing materials; upgrading the HVAC system, electrical lighting, power, communication, and fire protection systems; and replacement of the skylights. In addition, the rehabilitation would include upgrades for accessibility in the office and work spaces under the ADA. Upon project completion, historic landscaping would be restored in areas disturbed by construction.
Meets Project Objectives? **No.** Continuing the existing conditions does not protect the safety of the public or park employees, or provide for a positive public experience due to the deteriorated condition of the amphitheater structure. The continued deterioration of the amphitheater structure would result in destruction of the cultural resource.	Meets Project Objectives? **Yes.** The preferred alternative meets the San Francisco Maritime NHP planning objective of preserving park cultural resources; restoring altered and deteriorated resources for appropriate use; and providing equal access to programs, activities, and maritime experiences for individuals with disabilities. The preferred alternative also provides a safe and healthy environment for park employees and the public.

COMPARATIVE SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

Potential Environmental Impacts		
Impact Topic	**No-Action Alternative**	**Preferred Alternative**
Soils	Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to soils.	Short-term impacts to soils would be minor and adverse. Over the long term, soils would be replaced in all areas and there would be no long-term impacts.
Cultural Landscapes	The no-action alternative would result in a long-term, minor, adverse impact to the cultural resource defined by the NRHP nomination boundary.	The preferred alternative would result in short-term, minor, adverse impacts, and long-term, minor to moderate, beneficial impacts to cultural landscapes.
Historic Structures and Districts	The no-action alternative would result in a long-term, moderate, adverse impact to the cultural resource defined by the NRHP nomination boundary.	The preferred alternative would result in a long-term, moderate, beneficial impact to historic structures and districts.
Archeological Resources	Continued routine maintenance and repairs of the structure under this alternative would not impact known or previously unknown archeological resources.	The preferred alternative would not impact known archeological resources. Previously unknown intact archeological resources could be uncovered during the preferred alternative. Long-term, minor to moderate beneficial impacts to archeological resources may result depending on whether previously undiscovered resources are uncovered during the course of the project.
Museum Collections	Impacts to museum collections would be short and long term, minor to moderate, and adverse.	During the short-term construction period, the impacts would be negligible to minor and adverse. In the long term, impacts would be minor to moderate and beneficial.
Visitor Use and Experience	The no-action alternative would result in short- and long-term, minor to moderate, adverse impacts.	Short-term impacts to visitor use and experience from the preferred alternative would be moderate and adverse. Long-term impacts would be moderate and beneficial.
Health and Safety	Short- and long-term impacts to health and safety from the no-action alternative would be minor and adverse assuming the implementation of appropriate mitigation measures to protect health and safety.	Short-term impacts of the preferred alternative to the public and construction workers' health and safety from construction activities would be negligible and adverse. Long-term impacts of the preferred alternative would be moderate and beneficial to the public and park employee's health and safety.
Park Operations	Short-term impacts to park operations from the no-action alternative would be negligible to minor and adverse. The long-term impacts of the no-action alternative would be moderate and adverse.	Short-term impacts to park operations from the preferred alternative would be minor and adverse. Long-term impacts to park operations would be moderate and beneficial.
Socioeconomics	Short- and long-term impacts of the no-action alternative to socio-economics would be minor to moderate and adverse.	The short-term impacts to socioeconomics from the preferred alternative would be minor to moderate and adverse. There would be no long-term socioeconomic impacts.

Potential Environmental Impacts		
Impact Topic	**No-Action Alternative**	**Preferred Alternative**
Transportation	Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to transportation.	Impacts to transportation from the preferred alternative would be short term, minor to moderate, and adverse, and long term, negligible, and adverse.
Energy Requirements and Conservation Potential	Short-term impacts from the no-action alternative would be anticipated to be negligible to minor and adverse. The long-term impacts to energy requirements and conservation potential as a result of structure closure would be negligible to minor and beneficial.	Short-term impacts to energy requirements and conservation potential from the energy requirements for rehabilitation of the amphitheater structure would be negligible and adverse; long-term impacts would be beneficial and minor.

AFFECTED ENVIRONMENT

Detailed information on resources of the San Francisco Maritime NHP can be found in the *San Francisco Maritime National Historical Park General Management Plan* (1997). This section provides a description of the park and identifies resources potentially affected by the Aquatic Park amphitheater rehabilitation project.

LOCATION AND GENERAL DESCRIPTION OF THE PARK

The San Francisco Maritime NHP is located on the northern waterfront of San Francisco, at the west end of San Francisco's Fisherman's Wharf, along the north side of Beach Street (see figure 1). The bleachers are located on either side of the central block of the Aquatic Park Bathhouse, located at the foot of Polk Street between Van Ness Avenue and Hyde Street. San Francisco Maritime NHP consists of six areas regularly open to the public: The Aquatic Park Bathhouse (maritime museum and senior center), Aquatic Park, Victorian Park, the visitor center (on the corner of Hyde and Jefferson), Hyde Street Pier and historic vessels, and Building E at Lower Fort Mason. The park also owns and maintains 35 acres of urban parkland and uses services and storage facilities on federal properties in the vicinity. Included within the boundary of the historic district is Victorian Park, which includes the turnaround for the Hyde Street historic cable car and the large public lawn area that slopes down toward the bay. Historic vessels moored at the Hyde Street Pier include the scow schooner *Alma*, square-rigged ship *Balclutha*, schooner *C.A. Thayer*, ferry *Eureka*, the ocean tug *Hercules*, and the river tug *Eppleton Hall* (NPS 1997, 2005).

DESCRIPTION OF THE AMPHITHEATER STRUCTURE

Descriptions of the buildings and features are primarily derived from the NPS Cultural Landscape Inventory (NPS 2001b).

Aquatic Park Bathhouse

The main building at the San Francisco Maritime NHP is the Aquatic Park Bathhouse constructed between 1936 and 1939, as a joint project between the city of San Francisco and the federal Works Progress Administration (WPA) (figure 6).

The Aquatic Park Bathhouse is a four-story, symmetrical, reinforced concrete building with curvilinear walls and flat roofs. A prominent feature of the building is the large window openings on all of the elevations, and entrances on the north and south elevations. The structure was designed by William Mooser, Senior and Junior. The *streamline moderne*

FIGURE 6. AQUATIC PARK BATHHOUSE AND PROMENADE VIEWED FROM THE WEST BLEACHERS

style is evident in the design of the buildings and support facilities, in addition to the design of the municipal pier and beach. The north side of the building facing the cove is flanked to the east and west by concrete bleachers. The building is banked into the slope as it gradually descends toward San Francisco Bay. The main entrance is on the second floor along the south elevation, facing the foot of Polk Street. Additional access is possible on the first floor through doors on the north elevation facing the beach. Many of the windows are round with metal frames, mimicking the portholes of a ship.

The main entrance is sheltered by a small marquee. The doors are edged with a carved, green slate surround sculpted by WPA artist Sargent Johnson (one of two African American artists working in the WPA art program on the west coast). The interior features many original works of art by various WPA artists. The main lounge of the bathhouse (museum) is on the second floor (street-level entrance). The ground floor is at grade on the north (bay) elevation and below grade on the south (street) elevation. The main portion of the first floor is the former "Grand Concession" where a concessions stand operated and opened onto the beach at the north elevation.

The roundness of the building walls, the repetition of the nautical elements such as porthole windows and art works with aquatic motifs all combine into a common sense of design and purpose. The buildings and the site design are outstanding examples of *streamline moderne* style. The park has no architectural parallel on the west coast, and although on a smaller scale, it rivals the design quality of portions of Miami Beach, famous for its *deco* and *modern* buildings.

The structure remains largely unaltered, and thus has architectural integrity. The art works inside the bathhouse (maritime museum) are outstanding examples of federally funded art of the 1930s. Participating artists include Hilaire Hiler, Sargent Johnson, Beniamino Bufano, Richard Ayer, and Charles Nunemaker (NRHP Nomination Form, updated 1982).

Bleachers

The amphitheatre complex consists of three bleacher structures, two to the east of the museum and one to the west. For the purposes of this document, these sections are described as the east, center, and west bleachers. From a structural standpoint, the reinforced concrete bleachers are an integral part of the museum building. The east and central bleachers (65 feet by 250 feet) are larger and elongated and feature 11 rows of seating. The west bleachers (30 feet by 100 feet) contain four rows of seats.

The basic construction of the bleachers (constructed in 1938) is cast-in-place concrete treads and risers supported by cast-in-place concrete beams on concrete columns. In general, the platform benches are approximately 5 feet wide and 8 to 9 inches tall. Each riser is approximately 4-inch-thick concrete, while the treads are 8 inches thick. The exposed reinforcing consists of deformed square bars. Metal handrails, similar to the museum parapet, delineate the front of the lowest level of bleacher seating and separate the seats from the pedestrian circulation in the front of the building along the shoreline. On top of the underlying structure is a 2-inch topping slab over a waterproofing membrane (BSA 2003). The structure's beams are spaced 16 feet on center and have three equal 16-foot spans. The rear wall of the facility backs up to the hillside to the south, with a cast-in-place retaining wall above, sloping toward the waterfront.

Historically, the space beneath the eastern-most bleacher was unfinished and not intended for occupation, except at the west end—the location of the Aquatic Park first-aid station. The space beneath the central bleacher was a boy's and men's dressing room with showers, toilets, and drying rooms. The women's dressing room was beneath the west bleachers. This area also contained a basket room, toilets, and showers. A stairway connects the upper plateau of Aquatic Park with the beach promenade along the outer edge of the western bleachers.

The space beneath the eastern-most bleachers is still essentially unfinished. Below the east bleachers, the structure slopes downward toward the north as the bleachers step down to the promenade and shoreline. A machine shop, storage, and office spaces are found beneath the eastern bleachers. The smaller office spaces at the west end of the east bleachers are in the original location of the Aquatic Park hospital and first-aid station. The area below the east bleacher stadium seating contains a painted World War II-era wall mural.

The space beneath the central bleachers contains a hallway or passage on an east-west axis, an office, exhibit fabrication shops, storage rooms, copy room, photography office, and darkroom. The finished space beneath the western bleachers contains a park maintenance work space and offices, and the senior center, which is used for meetings and crafts.
A series of wire-glass skylights set into the roofs are just south of the bleachers and were constructed to provide natural light to the below-grade interior spaces. The depth of the soil over the roofs is approximately 2 feet. Protective covers were installed over the bathhouse skylights in 1993 to protect the deteriorating grade-level skylights.

The central and west bleachers have been continuously occupied since construction in the 1930s. The east bleachers was abandoned for a period of years and reuse began approximately 20 years ago.

Water infiltration problems plague the bleacher structure and have resulted in significant deterioration. The National Park Service has made temporary repairs to the structure, including installation of an epoxy waterproofing coating in 1998, and caulking between joints to prevent water infiltration in 2000. These repairs have provided some measure of prevention of leaking water; however, the repairs are site specific and do not represent an overall solution. Water continues to damage the structure and infiltrate into the occupied areas below (BSA 2005).

In 2004, temporary shoring was placed under the east bleachers to allow the area to remain open for the popular Fourth of July celebration. The shoring was not intended to be used as a permanent solution and was estimated to only be viable for several years.

For additional details, see "Historic Structures and Districts" below.

The Promenade

The promenade is a concrete-paved, 15-foot-wide walkway extending along the cove shoreline, abutting the seawall. It begins at the eastern end of the park's seawall, adjacent to the east restroom, and continues along the cove to the west restroom and Van Ness Avenue. The promenade provides access to the beach, the east and west restrooms, the bleachers, the bathhouse, Jefferson Street, Van Ness Avenue, and the Municipal Pier. In addition to the pedestrian promenade along the bay, a system of paved walkways throughout the district date from the period of significance.

Promenade Retaining Wall

The concrete retaining wall begins at the separation of the promenade and the State Belt Line Railroad and curves to the north side of the west restroom, forming a small lawn area.

SOILS

Site-specific soils information is not available; however, the site lies within the San Francisco Bay Area, close to the shoreline. General soils mapping for the area indicates that the soils consist of mud, sand, gravel, and silt with the potential that the material is all or partially artificial fill brought to the site during development of the San Francisco area in the early part of the 20th century (http://quake.wr.usgs.gov/prepare/soil-type) (NPS 1986).

CULTURAL LANDSCAPES

Elements of the Aquatic Park NHL District include the Aquatic Park Bathhouse, Victorian Park, the landscape grounds, native or historic vegetation, spatial organization, land use, circulation patterns, views and vistas, and the associated beach and lagoon. A detailed and extensive study of the cultural landscape was produced by the National Park Service in 2001. This document evaluated individual elements to the cultural landscape in terms of NRHP eligibility. The main building is the Aquatic Park Bathhouse, which currently serves as a museum facility and a senior center. The period of significance of 1920 to 1945 reflects the era of initial park planning, from the initial development plan (1920), to site grading and construction (1945). Contributing elements to the NRHP include spatial organization, cluster arrangement, buildings and structures, circulation, land use, topography, and views and vistas (table 1). Nonnative vegetation and small-scale features do not contribute as landscape features.

The area of potential effect includes the areas of construction, fencing, and access for construction equipment. The boundaries for the area of potential effect are largely defined by the extent of the cultural landscape, extending to the south at the sidewalk along Beach Street, to the west of the west bleachers (including the lawn and landscape elements) and extending to Van Ness Avenue, to the west of the east bleachers (including the pathway, landscape elements, skylights, walls, cypress trees, and other vegetation) and extending to the eastern edge of Victorian Park, and north to San Francisco Bay, along the beach promenade (figure 7).

HISTORIC STRUCTURES AND DISTRICTS

There are four historic buildings and 10 historic structures in the Aquatic Park NHL District. The four buildings include the Aquatic Park Bathhouse, the west restroom, the east restroom, and the Sea Scout base. The 10 structures include the east and west bleachers, the seawall, the east and west speaker towers, the San Francisco Municipal Pier, the Aquatic Park southwest retaining wall, the promenade and retaining wall, and a concrete retaining wall. All of the buildings and structures date from the period of significance (1920–1945).

The bathhouse, its changing rooms, the bleacher structures, and the speaker towers comprised the core of the park where the majority of people were expected to congregate. The bathhouse and bleachers also functioned as a visual barrier between the adjacent commercial activities of the city and the recreational users at the beach. The east and west restrooms mark the east and west extent of the beach area.

TABLE 1. CONTRIBUTING ELEMENTS OF THE AQUATIC PARK NATIONAL HISTORIC LANDMARK DISTRICT

Buildings and Structures	
Bathhouse	
	Van Ness Avenue Retaining Wall
	East and West Speaker Towers
	Municipal Pier
	Seawall
Bleachers	
	East and West Restrooms
	Promenade Retaining Wall
	Sea Scout Base, Sea Scout Stairs
	Stone Curbing
Circulation	
	State Beltline Railroad Tracks
	Sidewalks Along Van Ness Avenue
	Paved Walkway System
	Van Ness Avenue Extension
	Cove
	Bathhouse Ramps
	Promenade
	Cluster Arrangement
Land Use	
	Natural Systems and Features
	Spatial Organization
	Topography
	View and Vistas
Small Scale Features	
	Bleacher Rails
	Promenade and Municipal Pier Lamp Posts
	Municipal Pier Bleachers
	Stone Curbing

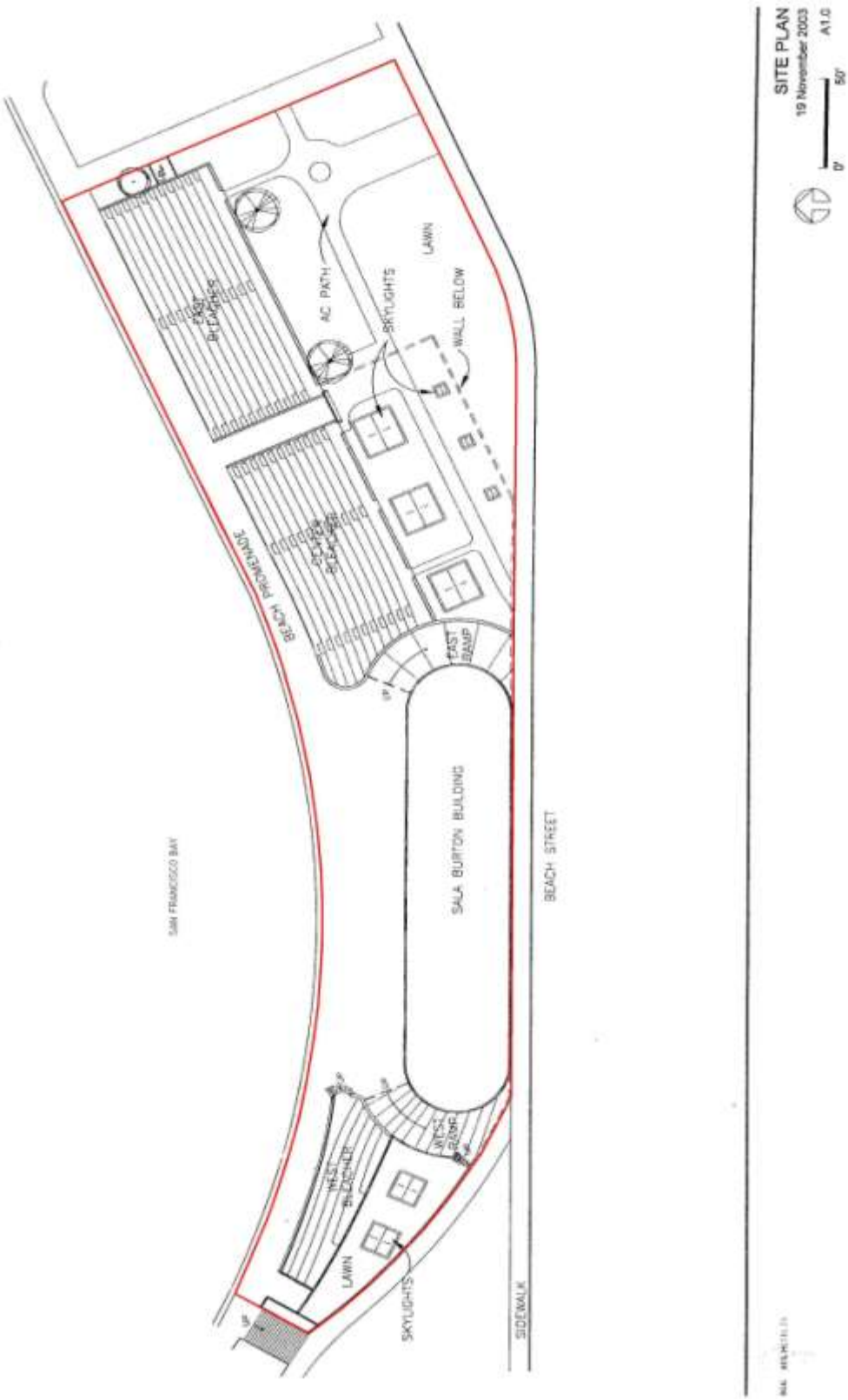

FIGURE 7. AREA OF POTENTIAL EFFECT

Only a portion of the bathhouse and the bleachers would be directly impacted by the proposed action. Circulation elements and the promenade would be indirectly impacted during the proposed action.

ARCHEOLOGICAL RESOURCES

Archeological resources in the Aquatic Park NHL District have been identified by NPS studies (Kelly 1976, 1980). The lagoon at Aquatic Park was used in the 19th century as an anchorage for ships. The cove also contains rubble that was dumped following the 1906 earthquake. Some burned items, including utensils, tools, bottles, coins, and nonorganic building materials, were encountered at the foot of Van Ness Avenue during construction in the 1970s. Other submerged archeological resources may include the remnants of a U.S. Army pier (ca. 1871) and a State Belt Line Railroad trestle (1914).

Historic sites can be defined as archeological and non-archeological. Historic archeological sites are the remains of sites no longer in use or maintained, and must have a clearly defined archeological potential (i.e., associated artifacts, features, ecological evidence). Archeological properties are "the place or places where remnants of a past culture survive in a physical context that allows for the interpretation of these remains. It is this physical evidence of the past and it's patterning that is the archeologist's database. The physical evidence, or archeological remains, usually takes the form of artifacts (e.g., fragments of tools, ceramic vessels or animal remains), features (e.g., remnants of walls, cooking hearths, or trash), or middens and ecological evidence (e.g., pollens representing plants that were in the area when the activities occurred)" (Townsend et al. 1993:2).

Although not anticipated, there is the possibility that artifacts related to the building's early construction, debris from the 1906 earthquake, or remains from a previously undocumented historic or prehistoric cultural resource could be uncovered during construction and/or during any earth disturbance. Although it is unlikely that significant intact deposits would be discovered during the proposed project, the possibility remains that previously unknown archeological resources could be affected by the preferred alternative.

MUSEUM COLLECTIONS

The space beneath the bleachers serves as work space for NPS employees as well as storage for museum exhibits and photographs. The museum exhibit storage involves museum collections used in past exhibits, which are currently not included in active exhibits. There are temperature-controlled storage units in the work space as well as a darkroom to develop photographs. The storage includes nitrate negative cabinets for storage of San Francisco Maritime NHP negatives, and also serves as a repository for negatives from other parks in the Pacific West Region. All of these storage areas and work spaces are impacted by the deteriorating condition and the existing deficiencies in the building systems such as inadequate ventilation, inadequate fire protection, and inadequate electrical systems. The museum collections include documents, maps, photographs, and artifacts.

VISITOR USE AND EXPERIENCE

Total park visitation is approximately 3.6 million visits per year. The amphitheater structure is integral to the visitor experience of the national historic landmark ships berthed at Hyde Street Pier, the lagoon, the *streamline moderne* style WPA building, San Francisco Bay, the waterfront culture, and the maritime heritage. The waterfront promenade connects to world famous Fisherman's Wharf, which is visited by everyone coming to the waterfront. The promenade is popular with pedestrians, bicyclists, rollerbladers, sunbathers, and others pursuing recreational activities. The Fisherman's Wharf area is currently acknowledged as the third-most-visited destination point in the United States. The area experiences seasonal visitation, with the peak tourist season being the summer months. During this time, hundreds of visitors use the bleachers at the amphitheater structure daily and during special events such as the Fourth of July celebration and Fleet Week, when there is standing room only (NPS 2004).

While sitting in the bleachers, visitors have a direct visual experience of the Golden Gate Bridge, worldwide cargo ships coming and going through the Bay, as well as ferries, tugboats, sailboats, and power craft. The Marin Headlands, Fort Baker, Alcatraz, and Tiburon Island, and the opposite shores of Sausalito, Richmond Bay, Oakland, China Camp, and Alameda can also be viewed from this vantage point (NPS 2004).

The park permits a variety of special events over the course of the year. Two large events are permitted each year, such as the Bridge to Bridge triathlon that draws upward of 10,000 runners. There are numerous medium-sized events, such as the Across the Bay 12k and the whale boat race. People attending and/or watching these events generally congregate on the lawn areas rather than the bleachers.

HEALTH AND SAFETY

A recent condition assessment determined the amphitheater structure is unsafe, and can no longer be maintained through use of stopgap measures or piecemeal repairs. Due to general weathering and exposure within its sea/salt environment, most of the Aquatic Park bleacher structures are in a severely deteriorated condition. The deterioration has resulted in falling concrete and water infiltration. Continued use would create unsafe conditions for both park staff and senior citizens who use the space below the bleachers (NPS 2004). Continued deterioration would result in permanent closure of the structures due to health and safety considerations.

The amphitheater building contains HVAC systems that do not have sufficient heating or ventilation capacity (BSA 2003).The amphitheater structure contains hazardous materials including asbestos piping, lead-based paints, and asbestos-containing roof felt used in the waterproofing (NPS 2004). In addition, the hazardous materials storage room does not have adequate ventilation to meet current standards (BSA 2003).

PARK OPERATIONS

The bleachers sitting area forms the roof of approximately 40,000 square feet of work space. The east bleachers currently house the park's shop and related areas. The center bleacher section contains miscellaneous office and storage spaces (BSA 2003). Work spaces and offices located beneath the bleachers of the amphitheater structure are typically occupied by 10 to 12 staff on a daily basis. There is an active photographic lab and construction shop, metal shop, and an exhibit shop. The area is used as

work space for craftsmen, technicians, and as an administrative space in support of the continued maintenance of the ships, grounds, and exhibits at the park. The area also houses storage for equipment, signs, and hazardous materials. Temporary shoring installed in 2003 dramatically restricts the ability of the staff to complete projects for the ships and other facilities (NPS 2004).

SOCIOECONOMICS

The city of San Francisco is an office, retail, and service center. The major employment center, the Financial District, is in the downtown area, approximately 2 miles south of the park. The tourist industry contributes substantially to the city's economy. Fisherman's Wharf is one of San Francisco's leading attractions, with approximately 87% of visitors to the city stopping there. Many jobs are directly related to tourism and visitor spending (NPS 1997a).

The building space beneath the bleachers includes space that is in daily use by the nonprofit San Francisco Senior Center, the oldest formally organized senior center in the United States (NPS 1997a). The seniors have classes, activities, and meals at this location, serving approximately 60,000 lunches per year. There is a high school immediately south of the project area, and students use the bleachers and adjacent area for track team training and the physical education program. Two swim clubs are active to the east of the park and access the bay to swim from their location; however, swimmers frequently exit the bay in the area of the promenade, and near the proposed construction zone. The rowing clubs use the NPS and city parking spaces at the west end of Jefferson Street. The senior center, contractors, event caterers, and staff use the promenade area for parking.

The park's cooperating association, the San Francisco Maritime Park Association, rents out the museum and surrounding areas for special events through an event coordinator. Rental fees range from $2,700 to $5,000, depending on the number of people participating in the event and how much of the facility is being used (NPS 2005).

TRANSPORTATION

San Francisco Maritime NHP is within a 30-minute walk of the downtown area, and is served by various modes of public transportation. The second-story entrance of the museum faces Beach Street, near the intersection of Polk and Beach streets. A city bus stop is located directly

in front of the museum building on Beach Street. The promenade proceeds along the shore of San Francisco Bay and behind the museum building. In addition to pedestrian traffic, the promenade is a route for bicyclists and accommodates vehicle parking and emergency vehicle access. In addition to parking on the promenade, NPS employees and volunteers are given stickers to allow them to park all day in NPS-designated parking spaces. Additional parking is available on Jefferson Street and Van Ness Avenue. Approximately two blocks east of the museum and bleacher structures is the Hyde Street turn-around for the historic San Francisco cable car system. One of the historic cable car lines connecting downtown San Francisco with the northern waterfront, extends down Hyde Street and terminates at the cable car turn-around in Victorian Park, which is part of San Francisco Maritime NHP.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

The project is located in the urbanized Fisherman's Wharf area of San Francisco. The bathhouse and bleachers were constructed in the 1930s. The bathhouse was subsequently modified and converted to a museum. There are skylights that permit natural light into the work spaces below the bleachers; however, the skylights are not designed to be energy efficient. The electrical and ventilation systems are outdated and do not conserve energy.

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This section describes the potential environmental consequences associated with the no-action and preferred alternatives. The methodologies and assumptions for assessing environmental consequences are discussed, including consideration of context, intensity, and duration of impacts; cumulative impacts; and measures to mitigate impacts. As mandated by NPS policy, resource impairment is explained and then assessed for each alternative. Subsequent subject matter in this section is organized by impact topic, first for the no-action alternative and then for the NPS preferred alternative.

METHODOLOGY

Overall, the National Park Service based these impact analyses and conclusions on the review of existing literature and San Francisco Maritime NHP studies, information provided by experts at the park and other agencies, and public input.

CONTEXT, DURATION, AND INTENSITY AND TYPE OF IMPACT

The following definitions were used to evaluate the context, intensity, duration, and cumulative nature of impacts associated with project alternatives.

Context

Context is the setting within which an impact is analyzed such as local, parkwide, or regional. The Council on Environmental Quality requires that impact analyses include discussions of context. For this environmental assessment, local impacts would occur within the general vicinity of the amphitheater in Aquatic Park, while parkwide impacts would affect a greater portion of the park, and regional impacts would extend outside the limits of the park.

Duration

The duration of an impact is the time period for which the impacts are evident and are expressed in the short term or in the long term. A short-term impact would be temporary in duration; an effect that within a short period of time, generally less than five years, would no longer be detectable as the resource is returned to its predisturbance condition or appearance, and would be associated with construction activities, as well as the period of site rehabilitation. Depending on the resource, impacts may last as long as construction takes place, or a single year or growing season, or longer. Long-term impacts represent a change in a resource or its condition that does not return the resource to predisturbance condition or appearance, and for all practical purposes is considered permanent.

Intensity

Impact intensity is the degree to which a resource would be beneficially or adversely affected. The criteria that were used to rate the intensity of the impacts for each resource topic are presented later in this section under each topic heading.

Type of Impact

Impacts can be beneficial or adverse. Beneficial impacts would improve resource conditions while adverse impacts would deplete or negatively alter resources.

IMPACT INTENSITY THRESHOLDS

Soils

All available information on soils potentially impacted in the park was compiled from available existing information. Predictions about short- and long-term site impacts were based on the proposed project and similar projects. The thresholds of change for the intensity of an impact to soils are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Soils would not be affected or the effects to soils would be below or at the lower levels of detection. Any effects to soils would be slight.
Minor	The effects to soils would be detectable. Effects to soil areas would be small and localized. Mitigation may be needed to offset adverse effects and would be relatively simple to implement and likely be successful.
Moderate	The effect on soils would be readily apparent and result in a change to the soil character over a relatively wide area. Mitigation measures would be necessary to offset adverse effects and likely be successful.
Major	The effect on soils would be readily apparent and substantially change the character of the soils over a large area. Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.

Cultural Landscapes

Cultural landscapes are the result of the long interaction between people and the land—the influence of human beliefs and actions over time on the natural landscape. Shaped through time by historical land-use and management practices, as well as politics and property laws,

levels of technology, and economic conditions, cultural landscapes provide a living record of an area's past, a visual chronicle of its history. The dynamic nature of modern human life, however, contributes to the continual reshaping of cultural landscapes; making them a good source of information about specific times and places, but at the same time rendering their long-term preservation a challenge.

Impact Intensity	Intensity Definition
Negligible	Impact(s) is at the lowest levels of detection with neither adverse nor beneficial consequences. For purposes of section 106, the determination of effect would be *no adverse effect.*
Minor	Alteration of a pattern(s) or feature(s) of the landscape would not diminish the overall integrity of the landscape. The determination of effect for section 106 would be *no adverse effect.*
Moderate	Alteration of a pattern(s) or features(s) of the landscape would diminish the overall integrity of the landscape. The determination of effect for section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation, in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
Major	Alteration of a pattern(s) or features(s) of the landscape would diminish the overall integrity of the landscape. The determination of effect for section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council on Historic Preservation are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

Historic Structures and Districts

In order for a structure or building to be listed in the NRHP, it must be associated with an important historic context, i.e., possess significance—the meaning or value ascribed to the structure or building, *and* have integrity of those features necessary to convey its significance, i.e., location, design, setting, workmanship, materials, feeling, and association (see *National Register Bulletin No. 15*, *How to Apply the National Register Criteria for Evaluation*).

Impact Intensity	Intensity Definition
Negligible	Impact(s) is at the lowest levels of detection—barely perceptible and not measurable. For purposes of section 106, the determination of effect would be *no adverse effect.*
Minor	Alteration of a feature(s) would not diminish the overall integrity of the resource. For purposes of section 106, the determination of effect would be *no adverse effect.*

Impact Intensity	Intensity Definition
Moderate	Alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation, in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
Major	Alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council on Historic Preservation are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

Archeological Resources

Certain important research questions about human history can only be answered by the actual physical material of cultural resources. Archeological resources have the potential to answer, in whole or in part, such research questions. An archeological site(s) can be eligible to be listed in the NRHP if the site(s) has yielded, or may be likely to yield, information important in prehistory or history. An archeological site(s) can be nominated to the NRHP in one of three historic contexts or levels of significance: local, state, or national (see *National Register Bulletin #15*, *How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing impacts to archeological resources, thresholds of change for the intensity of an impact are based on the potential of the site(s) to yield information important in prehistory or history, as well as the probable historic context of the affected site(s). Following are the impact threshold definitions for archeological resources:

Impact Intensity	Intensity Definition
Negligible	Impact(s) is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for section 106 would be *no adverse effect.*
Minor	Adverse Impact: Disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for section 106 would be *no adverse effect.*
	Beneficial Impact: Maintenance and preservation of a site(s). The determination of effect for section 106 would be *no adverse effect.*
Moderate	Adverse Impact: Disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
	Beneficial Impact: Stabilization of a site(s). The determination of effect for section 106 would be *no adverse effect*.

Impact Intensity	Intensity Definition
Major	Adverse Impact: Disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be *adverse effect.* Measures to minimize or mitigate adverse impacts cannot be agreed on and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council on Historic Preservation are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).
	Beneficial Impact: Active intervention to preserve a site(s). The determination of effect for section 106 would be *no adverse effect.*

Museum Collections

Museum collections (historic artifacts, natural specimens, and archival and manuscript material) may be threatened by fire, theft, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventive conservation, supplemented by conservation treatment when necessary. The primary goal is preservation of artifacts in as stable condition as possible to prevent damage and minimize deterioration. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Impact is at the lowest levels of detection—barely measurable with no perceptible consequences, either adverse or beneficial, to museum collections.
Minor	Would affect the integrity of a few items in the museum collection, but would not degrade the usefulness of the collection for future research and interpretation.
Moderate	Would affect the integrity of many items in the museum collection and diminish the usefulness of the collection for future research and interpretation.
Major	Would affect the integrity of most items in the museum collection and destroy the usefulness of the collection for future research and interpretation.

Visitor Use and Experience

National Park Service *Management Policies* (2001) state that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the National Park Service is committed to providing appropriate, high-quality opportunities for people to enjoy the parks.

Part of the purpose of San Francisco Maritime NHP is to offer opportunities for recreation, education, inspiration, and enjoyment. Consequently, one of the park's management goals is to ensure that the visitor safely enjoys and is satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

Public scoping input and observation of visitation patterns, combined with an assessment of what is available to the public under current management, were used to estimate the effects of the actions in the various alternatives of this document. The impact on the ability of the visitor to experience a full range

of San Francisco Maritime NHP resources was analyzed by examining resources and objectives presented in the park significance statement. The thresholds of change for the intensity of an impact to visitor experience are defined as follows:

Impact Intensity	Intensity Definition
Negligible	The visitor would not be affected or changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the effects associated with the alternative.
Minor	Changes in visitor use and/or experience would be detectable, although the changes would be slight. Some members of the public would be aware of the effects associated with the alternative, but the effects would be slight and not noticeable by most visitors.
Moderate	Changes in visitor use and/or experience would be readily apparent to most of the public. Visitors would be aware of the effects associated with the alternative and might express an opinion about the changes.
Major	Changes in visitor use and/or experience would be readily apparent to all members of the public who come into contact with the resource, severely adverse or exceptionally beneficial. The visitors would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

Health and Safety

The impact assessment for health and safety focused on the type of health or safety issues, the number of potential individuals impacted, and the severity of the impact. The thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on employees or visitor health and safety.
Minor	The effect would be detectable, but would not have an appreciable effect on health and safety. If mitigation were needed, it would be relatively simple and would likely be successful.
Moderate	The effects would be readily apparent and would result in substantial, noticeable effects to health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful.
Major	The effects would be readily apparent and would result in substantial, noticeable effects to health and safety on a regional scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

Park Operations

Park operations, for the purpose of this analysis, refers to the quality and effectiveness of the infrastructure, and the ability to maintain the infrastructure used in the operation of a park in order to

adequately protect and preserve vital resources and provide for an effective visitor experience. This includes an analysis of the condition and usefulness of the facilities and developed features used to support the operations of the park. Facilities included in this project include the amphitheater structure in Aquatic Park, which includes six NPS offices on the west end; seven offices on the east end; ranger offices and storage for equipment, signs, and hazardous materials; an active photographic lab; a construction shop, metal shop, and sign shop. The park also rents out the museum and surrounding areas for special events.

Impact Intensity	Intensity Definition
Negligible	Park operations would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on park operations.
Minor	The effect would be detectable, but would be of a magnitude that would not have an appreciable effect on park operations. If mitigation was needed to offset adverse effects, it would be simple and likely successful.
Moderate	The effects would be readily apparent and would result in a substantial change in park operations in a manner noticeable to staff and to the public. Mitigation measures would be necessary to offset adverse effects and would likely be successful.
Major	The effects would be readily apparent, would result in a substantial change in park operations in a manner noticeable to staff and visitors and be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, would be extensive, and their success could not be guaranteed.

Socioeconomics

Issues were identified through the scoping process, and concerns covered by this section include effects on senior citizens and high school students who use the facilities; individuals and groups who have traditionally rented the museum and surrounding areas for special events, and the cooperating association that receives the rental revenue; and effects on businesses in the immediate area of the construction zone. Levels of intensity of impacts on park neighbors are as follows:

Impact Intensity	Intensity Definition
Negligible	The impact is barely detectable and/or would affect few neighbors. No effects would occur or the effects to socioeconomic conditions would be below or at the level of detection.
Minor	The impact is slight but detectable, and/or would affect a minority of neighbors. Any effects would be small and if mitigation were needed to offset potential adverse effects, it would be simple and successful.
Moderate	The impact is readily apparent and/or would affect many neighbors. Any effects would result in changes to socioeconomic conditions on a local scale. If mitigation is needed to offset potential adverse effects, it could be extensive, but would likely be successful.
Major	The effects to socioeconomic conditions would be readily apparent and would cause substantial changes to socioeconomic conditions in the region. Mitigation measures to offset potential adverse effects would be extensive and their success could not be guaranteed.

Transportation

This environmental assessment focuses on the effect of temporary changes to the roadway system and parking spaces, on traffic volumes and associated traffic flow, access and circulation, and safety conditions. The analysis of effects is based on professional transportation engineering judgment. Transportation impacts are evaluated in terms of their context, duration, and intensity, and whether the impacts are considered to be beneficial or adverse.

Impacts are considered in the context of being either beneficial or adverse on traffic flow and/or traffic safety conditions. Beneficial impacts would improve traffic flow and traffic safety by reducing levels of congestion and occurrences of vehicle to vehicle, vehicle to bicycle, and vehicle to pedestrian conflicts. Adverse impacts would negatively alter traffic flow and traffic safety by increasing levels of congestion and occurrences of such conflicts.

Impact Intensity	Intensity Definition
Negligible	Negligible impacts are effects considered not detectable and would have no discernible effect on traffic flow and/or traffic safety conditions.
Minor	Minor impacts are effects on traffic flow and/or traffic safety conditions that would be slightly detectable, but not expected to have an overall effect on those conditions.
Moderate	Moderate impacts would be clearly detectable and could have an appreciable effect on traffic flow and/or traffic safety conditions.
Major	Major impacts would have a substantial, highly noticeable influence on traffic flow and/or traffic safety conditions and could permanently alter those conditions.

Energy Requirements and Conservation Potential

Impact Intensity	Intensity Definition
Negligible	No effects would occur or the effects to energy requirements and conservation potential would be below or at the level of detection. The effect would be slight and no long-term effects to energy requirements and conservation potential would occur.
Minor	The effects to energy requirements and conservation potential would be detectable. Any effects would be small and if mitigation were needed to offset potential adverse effects, it would be simple and successful.
Moderate	The effects to energy requirements and conservation potential would be readily apparent. Any effects would result in changes to energy requirements and conservation potential on a local scale. If mitigation is needed to offset potential adverse effects, it could be extensive, but would likely be successful.
Major	The effects to energy requirements and conservation potential would be readily apparent, long term, and would cause substantial changes to energy requirements and conservation potential conditions in the region. Mitigation measures to offset potential adverse effects would be extensive and their success could not be guaranteed.

Direct Versus Indirect

The following definitions of direct and indirect impacts are considered:

> *Direct* – an effect that is caused by an action and occurs at the same time and in the same place.
>
> *Indirect* – an effect that is caused by an action that is later in time or farther removed in distance, but is still reasonably foreseeable.

Cumulative Effects

Cumulative effects are the impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such action. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time.

The Council on Environmental Quality regulations, which implement NEPA, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7).

Cumulative impacts are considered for all alternatives and are presented at the end of each impact topic discussion analysis.

PROJECTS THAT MAKE UP THE CUMULATIVE IMPACT SCENARIO

To determine potential cumulative impacts, projects within the area surrounding San Francisco Maritime NHP were identified. The area included lands administered by the Port of San Francisco, the city and county of San Francisco, and Golden Gate National Recreation Area, as well as private development in the vicinity of the project. Potential projects identified as cumulative actions included any planning or development activity that was currently being implemented or that would be implemented in the reasonably foreseeable future.

These cumulative actions are evaluated in the cumulative impact analysis, in conjunction with the impacts of each alternative, to determine if they would have any additive effects on a particular natural resource, cultural resource, visitor use, or the socioeconomic environment. Because some of these cumulative actions are in the early planning stages, the evaluation of cumulative effects was based on a general description of the project.

CURRENT AND FUTURE ACTIONS

Current actions and those projected for the future could contribute to cumulative effects. These include:

- A roof, window, and door replacement project for the Aquatic Park Bathhouse, including the maritime museum, is planned for 2006. The project would require closure of the museum and some alteration of work areas, including alteration of the senior citizen access.

- The Aquatic Park Bathhouse would be recoated in the upcoming months.

- The park is in the process of designing new exhibits to be installed in the maritime museum on completion of the roof, window, and door replacement project. This project would require that the museum be closed during construction and installation of the new exhibits. This project is planned to run concurrently with the preferred alternative of this environmental assessment.

- Ghirardelli Square, a retail and office space complex located near Aquatic Park, recently changed ownership. The property is listed on the NRHP and on the California Register of Historical Resources. The new owners plan to convert all existing office space and some retail space to hotel use with a hotel of approximately 100 rooms. The project has received a Preliminary Mitigated Negative Declaration from the City and County of San Francisco Planning Department. Construction is expected to begin within the next year (San Francisco 2005).

- Preliminary planning for an extension of the San Francisco Municipal Railway (Muni) is underway. The extension, known as the "E-line," would extend the streetcar line from near Fisherman's Wharf (where the "F-line" currently ends) to Fort Mason.

There are several options for a route under study. In the vicinity of Aquatic Park, the proposed route would extend along Beach Street in both directions for two of the options under study. The third option would extend along Beach Street eastbound and along the promenade westbound (Wilbur Smith Associates 2004).

IMPAIRMENT OF SAN FRANCISCO MARITIME NATIONAL HISTORICAL PARK RESOURCES OR VALUES

In addition to determining the environmental consequences of the preferred and other alternatives, NPS *Management Policies* (2001) and Director's Order – 12 require analysis of potential effects to determine if actions would impair resources of the San Francisco Maritime NHP.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid or minimize, to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given NPS management discretion to allow certain impacts within parks, that discretion is limited by statutory requirements that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park
- identified as a goal in the *San Francisco Maritime National Historical Park General Management Plan* or other relevant NPS planning documents

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. In this "Environmental Consequences" section, a determination on impairment is made in the conclusion statement of the appropriate impact topics for each alternative. The National Park Service does not analyze recreational values / visitor experience (unless impacts are resource based), socioeconomic values, health and safety, or park operations for impairment.

IMPACTS TO CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

In this environmental assessment, impacts to cultural resources are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the Council on Environmental Quality that implement NEPA. These impact analyses are intended, however, to comply

with the requirements of both NEPA and section 106 of the National Historic Preservation Act. In accordance with Advisory Council on Historic Preservation regulations implementing section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), impacts to archeological and cultural resources were identified and evaluated by:

- determining the area of potential effects
- identifying cultural resources present in the area of potential effect that were either listed in or eligible to be listed in the NRHP
- applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the NRHP
- considering ways to avoid, minimize, or mitigate adverse effects

Under Advisory Council regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected NRHP-eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristics of a cultural resource that qualify it for inclusion in the NRHP, e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the preferred alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the NRHP.

Council on Environmental Quality regulations and the NPS *Conservation Planning, Environmental Impact Analysis, and Decision-making* (Director's Order – 12) also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by section 106 is similarly reduced. Although adverse effects under section 106 may be mitigated, the effect remains adverse.

A section 106 summary is included in the impact analysis sections for archeological and cultural resources under the preferred alternative. The section 106 summary is intended to meet the requirements of section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based on the criterion of effect and criteria of adverse effect found in Advisory Council regulations.

ENVIRONMENTAL CONSEQUENCES—ALTERNATIVE A: NO ACTION

Soils

Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to soils.

Cumulative Impacts. All but one of the past, present, and reasonably foreseeable future projects would have no impact on soils. The construction of the E-line could impact soils during construction activities, depending on which option is selected for location of the line. However, because the no-action alternative would not impact soils, there would be no cumulative impacts as a result of the no-action alternative.

Conclusion. Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to soils. Because the no-action alternative would not impact soils, there would be no cumulative impacts as a result of the no-action alternative.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of park resources or values.

Cultural Landscapes

The bleachers are part of the museum building and Aquatic Park Bathhouse, a significant feature of the Aquatic Park NHL District, which is listed in the NRHP. The bleachers are also part of the cultural landscape of the district. Elements in the cultural landscape include but are not limited to land use, spatial and cluster arrangements, topography, buildings and structures, views and vistas, and circulation. The spatial and clustering of individual elements was and still is based on coordinating the variety of activities that occur throughout the park. The spatial arrangement is essentially horizontal with three primary aspects focused on the beach, the promenade, and the upper terrace. The topography consists of three vertical aspects: slope, elevation, and solar aspect.

Under the no-action alternative, limited maintenance and repairs would continue to be performed on the bleachers to stabilize the structure and address safety and operations concerns. With limited sporadic repair and stabilization, the spatial organization, large-scale spatial relationships, and arrangement of elements that create vertical and horizontal planes that define the historic landscape would not be affected by this alternative.

The no-action alternative would not preclude measures to keep the structure from collapsing; however, the work would not include major repairs. Over time, the ability to keep up with repairs to areas of increasing size and severity of damage would not be sustainable. As a result of diminished structural integrity, the bleachers and space beneath the bleachers would become unusable. The eventual closure of the structure would change the way people interact with the natural landscape in this area. People now sit in the bleachers to view the surrounding landscape. That would no longer be possible as a result of the structural deterioration. Although the views from the bleachers would not change, the ability to experience these views would change. Circulation could also be affected, depending on the need to

close walkways or portions of walkways surrounding the bleachers in order to protect the public. These changes would not diminish the overall integrity of the cultural landscape. Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to native or historic vegetation. Therefore, the no-action alterative would result in a long-term, minor, adverse impact to the cultural landscape.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect cultural landscapes include the E-line extension project. The E-line extension project is still in the feasibility stage so exact details on the E-line location are currently unknown. Alternatives include routing along Beach Street with one alternative routing in one direction along the promenade. Routing could impact the cultural landscape by changing the spatial arrangement, land use, and circulation. The National Park Service is part of the project team and would be able to provide input into the design of the E-line to minimize impacts to the cultural landscape. All but one of the past, present, and reasonably foreseeable future projects would have no impact on historic or native vegetation. The construction of the E-line could impact vegetation during construction activities, depending on which option is selected for location of the line. However, because the no-action alternative would not impact vegetation, there would be no cumulative impacts as a result of the no-action alternative.

This project would have a long-term, minor to moderate, adverse impact on the cultural landscape, depending on the exact location for the E-line extension. The cumulative effects of the long-term, minor, adverse impacts of the no-action alternative, in combination with the long-term, minor to moderate, adverse impacts from the other reasonably foreseeable project, would result in long-term, minor to moderate, adverse impacts to cultural landscapes.

Conclusion. The no-action alternative would result in a long-term, minor, adverse impact to the cultural landscape. Impacts would alter a character-defining feature(s), but would not diminish the integrity of the resource to the extent that its NRHP eligibility would be jeopardized. The cumulative effects of the long-term, minor, adverse impacts of the no-action alternative, in combination with the long-term, minor to moderate, adverse impacts from the other reasonably foreseeable project, would result in long-term, minor to moderate, adverse impacts to cultural landscapes.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant National Park Service planning documents, there would be no impairment of park resources or values.

Historic Structures and Districts

The bleachers are part of the maritime museum building and the Aquatic Park Bathhouse, a significant feature of the Aquatic Park NHL District, which is listed in the NRHP. Due to age, water infiltration, general weathering, and exposure in a sea/salt environment, a majority of the bleacher structures are in a deteriorated condition.

Under the no-action alternative, the bleachers would not undergo rehabilitation. The bleachers and related shops and work spaces are essential to the park and are integral to the operations, preservation, and theme of the park. The Aquatic Park Bathhouse and associated bleacher structures are specifically referenced in the park significance statements (NPS 1997a). A number of areas in the WPA-era concrete structure have experienced a large amount of deterioration due to deferred maintenance, reinforcement bar expansion, and the design limits of the original structure. Wooden shoring is currently in place to

keep the shape of the structure, support a temporary protective false ceiling in the space designed to catch falling debris, and to allow temporary access by the public to the bleachers viewing area. The bleachers form a visible and popular public viewing area that cannot be relocated or replicated in another location or be provided by an outside commercial facility. The bleacher structures are part of the NRHP nomination. Efforts would likely be made to keep the structures from completely failing, but such efforts could result in alteration of the character and diminishment of the historic structures. The no-action alternative would result in a long-term, moderate, adverse impact to historic structures defined by the NRHP nomination boundary.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect historic structures and districts include the roof, window, and door replacement project, the maritime museum recoating project, renovations to Ghirardelli Square, and the E-line extension project. Changes to the historic structures would be minimized through the planning process. The roof, window, and door replacement project and the recoating project would be completed to minimize the impacts on historic structures and districts by maintaining the character of the building. The E-line extension project is still in the feasibility stage, but the National Park Service is part of the project team and would be able to provide input into the design of the E-line to minimize impacts to the historic structures and districts. The cumulative projects would have a negligible to minor, adverse impact on the historic structures and districts. The Ghirardelli Square project would involve primarily interior renovations to convert office and retail space to hotel space. Exterior alterations would be presented and approved by the Landmarks Preservation Advisory Board as part of the certificate of appropriateness application. Exterior alterations would be designed to have a negligible to minor impact on the historic structures at Ghirardelli Square. Overall cumulative impacts to historic structures and districts from other projects would be short and long term, negligible to minor, and adverse. The no-action alternative would have a long-term, moderate, adverse impact on historic structures and districts. The overall cumulative impact to historic structures and districts of past, present, and reasonably foreseeable future projects, in combination with the no-action alternative, would be long term, moderate, and adverse, primarily due to the anticipated loss of use of the bleachers and associated facilities beneath the bleachers.

Conclusion. The no-action alternative would result in a long-term, moderate, adverse impact to historic structures and districts defined by the NRHP nomination boundary. The overall cumulative impact to historic structures and districts of past, present, and reasonably foreseeable future projects, in combination with the no-action alternative, would be long term, moderate, and adverse, primarily due to the anticipated loss of use of the bleachers and associated facilities beneath the bleachers.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant National Park Service planning documents, there would be no impairment of park resources or values.

Archeological Resources

Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to archeological resources.

Cumulative Impacts. All but one of the past, present, and reasonably foreseeable future projects would have no impact on archeological resources. The construction of the E-line could uncover previously unknown archeological resources during construction activities, depending on which option

is selected for location of the line. However, because the no-action alternative would not impact archeological resources, there would be no cumulative impacts as a result of the no-action alternative.

Conclusion. Continued routine maintenance and repairs of the structure under this alternative would not result in impacts to known archeological resources. Because the no-action alternative would not impact archeological resources, there would be no cumulative impacts as a result of the no-action alternative.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant National Park Service planning documents, there would be no impairment of park resources or values.

Museum Collections

The area below the bleachers is used for preparation and storage of museum exhibits, general museum storage, an active photographic lab, a photographic office, photographic storage, nitrate negative storage freezers, and library storage. Under the no-action alternative, these areas would continue to potentially be subjected to water infiltration and inadequate fire protection, which could damage museum collections. Falling concrete could damage museum exhibits and collections. Currently, the falling concrete is stopped by the existing ceiling tiles in some areas and by the temporary support structure in other areas; however, over the long term, these protective measures could fail. In the short and long term, this would represent a minor to moderate adverse impact to museum collections. Eventually, as the structure continues to deteriorate, museum collections would have to be moved to an offsite storage and preparation area for protection.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect museum collections include the roof, window, and door replacement project and the maritime museum recoating project. Both projects are designed to provide protection to museum collections through improvements to the museum building. The cumulative projects would have a long-term, minor, beneficial impact on the museum collections. The cumulative effects of the short- and long-term, minor to moderate, adverse impacts of the no-action alternative, in combination with the long-term, minor, beneficial impacts from other past, present, and reasonably foreseeable projects, would result in short- and long-term, minor to moderate, adverse impacts to museum collections, primarily due to the potential for damage to museum collections from water infiltration, falling concrete, and inadequate fire protection.

Conclusion. The no-action alternative would result in a short- and long-term, minor to moderate, adverse impact to museum collections. Eventually, as the structure continues to deteriorate, museum collections would be moved to an offsite storage and preparation area for protection. The cumulative effects of the short- and long-term, minor to moderate impacts of the no-action alternative, in combination with the minor beneficial impacts from other past, present, and reasonably foreseeable projects, would result in short- and long-term, minor to moderate, adverse impacts to museum collections, primarily due to the potential for damage to museum collections from water infiltration, falling concrete, and inadequate fire protection.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3)

identified as a goal in the park's *General Management Plan* or other relevant National Park Service planning documents, there would be no impairment of park resources or values.

Visitor Use and Experience

The bleachers are currently used by park visitors and the general public. The public can sit and watch ships moving into and out of the bay. Visitors often rest on the bleachers and enjoy the surrounding views. The bleachers are a popular spot for viewing Fourth of July fireworks and Fleet Week activities. Although temporary shoring was installed in 2003 to allow continued use of the east bleachers, it was only considered adequate for several years. Under the no-action alternative, in the short term, the east bleachers would be closed to public use due to safety concerns related to the structure and the temporary nature of the shoring. Over the longer term, all of the bleachers would be closed due to safety concerns. Mitigation measures would likely keep the structure from collapsing, but would not provide adequate shoring to allow continued safe use of the structure. Most of the public would be aware of the changes. The short- and long-term impacts would be minor to moderate and adverse.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect visitor use and experience include the roof, window, and door replacement project scheduled for 2006, which would close the museum building during construction and limit access to the spaces below for the senior citizens, and would result in short-term, minor, adverse impacts. The maritime museum recoating project would result in short-term, negligible, adverse impacts to visitor use and experience due to limited access in active occupancy areas. The window and door replacement and museum recoating projects would have no long-term impacts to visitor use and experience. The project to replace exhibits in the museum building would have short-term, minor, adverse impacts to visitor use and experience because it too would result in temporary closure of the museum while the exhibits are being constructed and installed. However, new exhibits would enhance visitor experience and result in long-term, minor, beneficial impacts. Because Ghirardelli Square is located in the same vicinity as the proposed action, the construction involved in the conversion of retail space to hotel space would result in short-term, minor, adverse impacts to the public since both areas under construction would be tourist destinations. In the long term, although some retail shops would be closed, a new hotel would be available for public use resulting in long-term, minor, beneficial impacts. The E-line expansion project would also create short-term, minor, adverse impacts due to construction activities. Over the long term, a streetcar line that passes the park can easily carry visitors to several areas of high public use and would result in a moderate beneficial impact. The overall cumulative effect of other past, present, and reasonably foreseeable future projects would be short term, negligible to minor, and adverse, and long term, minor to moderate, and beneficial. The no-action alternative would contribute short- and long-term, minor to moderate, adverse impacts to cumulative impacts and the overall cumulative impacts to visitor use and experience would be short term, minor to moderate, and adverse. Over the long term, impacts to the public from individual projects would be both moderately beneficial and adverse from cumulative projects; however, when viewed in total, the overall impacts would be minor and beneficial, due primarily to the benefit of having the E-line extension.

Conclusion. The short- and long-term impacts to visitor use and experience from closure of the bleachers and spaces below would be minor to moderate and adverse. The overall cumulative impacts to visitor use and experience would be short term, minor to moderate, and adverse. Over the long term, impacts to the public from individual projects would be both moderately beneficial and adverse from cumulative projects; however, when viewed in total, the overall impacts would be minor and beneficial, due primarily to the benefit of having the E-line extension.

Health and Safety

Safety concerns exist with the continued deterioration of the bleacher structures under the no-action alternative. The temporary measures shoring up the amphitheater structure were installed in 2003, permitting continued use of the facility, but the shoring was intended to be temporary, lasting only a few years. Because there would be no change to the present course of action under this alternative, short- and long-term impacts would include unsafe conditions with continued use as a result of allowing the deterioration to continue without major repairs. Eventually, there would be no continued use of the bleachers and spaces beneath the bleachers due to safety concerns. Hazardous materials present in the structure would not be removed. Hazardous materials storage that does not have adequate ventilation as well as the work areas without adequate ventilation would continue to be used in the short term until the overall structural safety concerns would necessitate cessation of any use of the bleachers and the spaces beneath the bleachers. Relatively simple mitigation measures such as installing temporary barricades to bar entry to unsafe facilities, and measures to improve ventilation could be implemented to reduce potential impacts to health and safety. Under the no-action alternative, the amphitheater structure would continue to deteriorate over time, to the point that the structure would be unsafe and would no longer be available for use. The structure would likely be maintained in a manner to prevent total collapse; however, risks to safety would continue as a result of individuals crossing barricades to access the space. Short-term and long-term impacts to health and safety would be minor and adverse.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect health and safety include the roof, door, and window replacement project; the maritime museum recoating project; the Ghirardelli Square conversion; and construction of the E-line extension. During the construction period associated with these projects, there would be a short-term potential for safety-related impacts to workers and the general public as a result of construction activities. The short-term impacts would be negligible to minor and adverse with the implementation of appropriate safety controls such as barricades for the general public and training for workers. Over the long term, construction would be completed and there would be no long-term impacts to health and safety from most of the projects. The E-line does represent a potential for longer term safety impacts as a result of accidents involving streetcars and other vehicles or pedestrians. If the route includes a line along the promenade (which is one of the alternatives under study), there is an increased potential for accidents to occur (in spite of the projected slow speeds for streetcars in this area) due to the high number of pedestrians and bicyclists using the promenade. Long-term impacts would range from no impact to negligible and adverse. The no-action alternative would contribute short- and long-term, minor, adverse impacts. Overall cumulative impacts of the no-action alternative, combined with other past, present, and reasonably foreseeable projects, would be short and long term, negligible to minor, and adverse.

Conclusion. Short-term and long-term impacts to health and safety would be minor and adverse. The overall cumulative impacts of the no-action alternative, combined with other past, present, and reasonably foreseeable projects, would be short and long term, negligible to minor, and adverse.

Park Operations

The space beneath the bleachers includes office space, storage, workshops, an active photographic lab, a sign shop, and exhibit preparation space—all integral to park operations. These spaces currently suffer from water infiltration, inadequate fire protection, inadequate electrical and lighting systems, and inadequate ventilation. Under the no-action alternative, minor repairs would continue to be made, but there would be no major repairs or upgrades to any systems or work spaces. In the short term, impacts to park operations would be negligible to minor and associated with ongoing inconveniences linked to the

work spaces. Under the no-action alternative, the amphitheater structure would continue to deteriorate over time, to the point where the structure would no longer be available for use. Park operations would be relocated to other facilities, resulting in additional cost to the park as well as loss of the convenience of offices and workshops adjacent to the museum. The park would be required to expend limited financial resources to acquire space for offices and shops, likely at a distance from the park, impacting operational efficiency. This would likely result in impacts to other park resources (such as maintenance of the park's fleet of ships) and a potential reduction in visitor services. In addition, park staff would install and maintain signs and barricades blocking entry to the bleacher facilities, and periodically monitor the facilities to ensure that barricades and signs are effectively barring entry. Staff and the public would likely be aware of the effects to park operations of moving offices and workshops from the current location. Long-term impacts to park operations would be moderate and adverse.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect park operations include the roof, door, and window replacement project, and the maritime museum recoating project. Both projects would impact park work spaces in the short term, with the first project resulting in short-term closure of the museum building. In addition, park personnel would be required to oversee the projects and install temporary barricades and notices of closure. The cumulative projects would result in short-term minor impacts to park operations. Over the long term, there would be no impacts to park operations. The cumulative effect of the no-action alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, negligible to minor, and adverse. There would be no long-term cumulative impacts.

Conclusion. Short-term impacts to park operations from the no-action alternative would be negligible to minor and adverse. The long-term impacts of the no-action alternative would result in the necessity of moving park operations from the spaces beneath the bleachers and would result in moderate and adverse impacts. The cumulative effect of the no-action alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, negligible to minor, and adverse. There would be no long-term cumulative impacts.

Socioeconomics

The temporary measure of shoring up the east bleacher structures was implemented in 2003, continuing use of the facilities. Because there would be no change to the present course of action under this alternative, short-term impacts affecting school groups, senior citizens, and other groups that use the bleachers could include further deterioration of the structure, resulting in restrictions on its use and eventually, amphitheater closure. Groups that use the bleachers or the space beneath the bleachers would be forced to find other places to meet. This would result in some economic impacts to these organizations due to the likely cost of new meeting space. Under these circumstances, short- and long-term impacts would be minor to moderate and adverse. The condition of the deteriorated structure would be readily apparent and render it unusable. Although mitigation measures would keep the structure from collapsing, safety concerns would likely not permit continued occupation and use.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to have a measurable, long-term effect to socioeconomics include the Ghirardelli Square conversion of retail space to hotel space. The new hotel space would provide additional jobs and would attract additional tourists and business people who might stay in the area and likely spend money. The long-term impacts to socioeconomics would be minor to moderate and beneficial. The other past, present, and reasonably foreseeable future projects, in conjunction with the Ghirardelli Square improvements, would only have a short-term, negligible to minor, beneficial impact to area socioeconomics during the construction period as a result of the construction business and construction workers spending money in

the area. The no-action alternative would contribute short- and long-term, minor to moderate, adverse impacts. The overall cumulative effect of the no-action alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, negligible, and beneficial, and long term, minor, and beneficial.

Conclusion. Short- and long-term impacts of the no-action alternative to socioeconomics would be minor to moderate and adverse. The overall cumulative effects of the no-action alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, negligible, and beneficial, and long term, minor, and beneficial.

Transportation

Continued routine maintenance and repairs of the structure under the no-action alternative would not result in impacts to transportation.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect transportation include conversion of retail space to hotel space within Ghirardelli Square and the E-line extension, which could result in temporary increased presence of construction vehicles and heavy equipment operation. Since no action would be taken under this alternative, there would be no contribution to cumulative impacts.

Upon completion of construction, the E-line extension would provide historic streetcars to access the San Francisco Maritime NHP site and other nearby areas. The long-term impacts to transportation as a result of the E-line extension would be moderate and beneficial. The no-action alternative would not contribute to cumulative impacts. There would be no cumulative impacts to transportation as a result of the no-action alternative.

Conclusion. Continued routine maintenance and repairs of the structure would not result in impacts to transportation under the no-action alternative. The no-action alternative would not contribute to cumulative impacts. There would be no cumulative impacts to transportation as a result of the no-action alternative.

Energy Requirements and Conservation Potential

The no-action alternative would result in a steady increase in energy use through the need for ongoing maintenance and support of the severely deteriorated structure. Light fixtures, electrical, and HVAC systems would continue to be outdated and lack efficient energy use and potential conservation. Short-term impacts from the no-action alternative would be anticipated to be negligible to minor and adverse. The long-term impacts to energy use and conservation potential would be negligible to minor and beneficial because the deteriorated structure would eventually be unusable, and no further energy would be expended in the attempt to keep the structure operational.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect energy usage and conservation potential include the roof, door, and window replacement project scheduled for 2006, and the maritime museum recoating project. Both of these projects would require energy expenditure in the short term, resulting in negligible adverse impacts, and long-term, negligible to minor, beneficial impacts due to the reduction of maintenance requirements and the energy efficiency provided by installation of new doors and windows. The no-action alternative would contribute negligible to minor adverse impacts in the short term, and negligible to minor beneficial impacts in the

long term. The overall cumulative impacts from past, present, and reasonably foreseeable future projects, in conjunction with the no-action alternative, would be short term, negligible to minor, and adverse, and long term, negligible to minor, and beneficial.

Conclusion. Short-term impacts from the no-action alternative would be anticipated to be negligible to minor and adverse. The long-term impacts to energy requirements and conservation potential would be negligible to minor and beneficial. The overall cumulative impacts from past, present, and reasonably foreseeable future projects, in conjunction with the no-action alternative, would be short term, negligible to minor, and adverse, and long term, negligible to minor, and beneficial.

ENVIRONMENTAL CONSEQUENCES—ALTERNATIVE B: PREFERRED ALTERNATIVE

Soils

Under the preferred alternative, some soils against the retaining walls and in the area of the east bleachers may be moved and temporarily stockpiled to permit reconstruction of portions of the east bleachers. Soils would be moved and temporarily stockpiled to expose other portions of the retaining walls to permit installation of drainage controls. Soils placed over the roof, adjacent to the skylights, would be removed for skylight replacement and installation of new horizontal waterproofing. The soils are primarily fills, although they have been in place for approximately 70 years. Short-term impacts to soils would be minor and adverse. Over the long term, soils would be replaced in all areas and there would be no long-term impacts.

Cumulative Impacts. All but one of the past, present, and reasonably foreseeable future projects would have no impact on soils. The construction of the E-line could impact soils during construction activities, depending on which option is selected for location of the line. The construction would have short-term, minor, adverse impacts to soil resources. The preferred alternative, in combination with the E-line extension, would have short-term, minor, and adverse cumulative impacts to soils. There would be no long-term impacts.

Conclusion. Short-term impacts to soils would be minor and adverse. Over the long term, soils would be replaced in all areas and there would be no long-term impacts. The preferred alternative, in combination with the E-line extension, would have short-term, minor, and adverse cumulative impacts to soils. There would be no long-term impacts.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of park resources or values.

Cultural Landscapes

Under the preferred alternative, the bleachers would undergo landscape rehabilitation. All work associated with the rehabilitation would be conducted under the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and would ensure that all landscape features retain, as much as possible, distinctive materials, features, spaces, and spatial relationships. The preferred alternative would be designed to preserve the integrity and historical character of the Aquatic Park Bathhouse (maritime museum) and associated bleachers, and restore or rehabilitate the historic landscape under guidance from the cultural landscape report to be completed in 2007. The preferred alternative would provide a long-term, minor to moderate, beneficial impact to the cultural landscape.

Impacts could occur to the circulation and views/visual aspect as a result of construction activities. The land use, spatial and cluster arrangements, and topography would not be impacted. The views/visual aspect would be impacted with the presence of construction equipment and associated construction activities. The extent of the open space would remain intact, but the visual characteristics would change in the short term due to the construction work. Rehabilitation may include the re-planting of trees, but they would only be re-planted in historical locations as guided by the cultural landscape report to be completed in 2007. Circulation patterns would be impacted during construction, with closure of the promenade, use of a portion of the promenade space for staging, placement of construction barricades, and other safety measures implemented during construction. Short-term impacts would be minor and adverse.

Nonnative and historic vegetation (cypress trees) would be disturbed as part of the construction activities associated with the preferred alternative. Vegetation and soils would be removed from construction areas adjacent to the east bleachers, including three large cypress trees, as well as certain areas of the retaining walls that would be exposed for installation of drainage controls. Nonnative/ nonhistoric vegetation would be removed over the roofs of work spaces beneath the bleachers to permit installation of horizontal waterproofing and new skylights. Vegetation impacts in the short term would be minor and adverse. In the long term, the cultural landscape report (to be completed in 2007) would guide reestablishment of landscaping and may use the historic vegetation plan developed in conjunction with the original Aquatic Park plan in 1938 (Punnett 1938). Some vegetation would be restored as part of the preferred alternative and other portions of the vegetation would be restored at a later date. The 1938 plan called for landscaping with shrubs surrounding the skylights in the west bleachers area and lawn or other low-growing ground cover to be planted in the remaining vegetated areas. The cultural landscape report would guide the replacement of cypress trees removed as a result of the preferred alternative. Even if the trees are replaced, it would take many years for them to mature and reach a similar size and appearance compared to those being removed. Long-term impacts to vegetation would be minor and beneficial with landscaping following historical guidance and patterns.

Under the preferred alternative, the existing path would be removed. Aspects of the current walkway configuration are not historic (e.g., removal of the pine tree added more asphalt). The upcoming cultural landscape report would be used as a historical landscape guide.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect cultural landscapes include the E-line extension project, which is still in the feasibility stage so details of line location are currently unknown. Alternatives include routing along Beach Street with one alternative routing in one direction along the promenade. Routing could impact the cultural landscape by changing the spatial arrangement, land use, and circulation. The National Park Service is part of the project team and would be able to provide input into the design of the E-line to minimize impacts to the cultural landscape. This project would have a long-term, minor to moderate, adverse impact on the cultural landscape, depending on the location of the E-line extension. The cumulative effects of the long-term, minor to moderate, beneficial impacts of the preferred alternative, in combination with the long-term, minor to moderate, adverse impacts of other reasonably foreseeable projects, would result in long-term, minor, adverse impacts to cultural landscapes.

Conclusion. The preferred alternative would result in a short-term, minor, adverse impact, and a long-term, minor to moderate, beneficial impact to cultural landscapes. The cumulative long-term, minor to moderate, beneficial impacts of the preferred alternative, in combination with the long-term, minor to moderate, adverse impacts from the other reasonably foreseeable project, would result in long-term, minor, adverse impacts to cultural landscapes.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of park resources or values.

Historic Structures and Districts

Under the preferred alternative, the bleachers and the space beneath the bleachers would undergo rehabilitation—drainage problems would be corrected and cracking and structural damage would be repaired. Additional construction work would prevent future water infiltration and related structural decline. Construction activities would be conducted within the guidelines of the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and would ensure that the structures retain distinctive materials, features, spaces, and spatial relationships, to the extent possible. Distinctive features associated with the bleachers are dominated by the *streamline moderne* design details that were incorporated into the bleacher wingwalls. Materials used in construction were not unique at the time of construction. The spatial relationships and internal space beneath the bleachers are not distinctive or unique in design or construction. Materials and components used in the rehabilitation would be compatible in terms of scale, texture, color, and size/mass; the new construction would match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features would be substantiated by documentary, physical, or pictorial evidence. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property would be avoided. Any new features would not affect the principal façade of the bleachers. The preferred alternative would provide long-term, moderate, beneficial impacts to historic structures and districts.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect historic structures and districts include the roof, door, and window replacement project; the maritime museum recoating project; the Ghirardelli Square conversion; and construction of the E-line extension. Changes to the historic structures would be minimized via the planning process. The roof, window, and door replacement project and the recoating project would maintain the character of the building by minimizing impacts to historic structures and districts. The E-line extension project is still in

the feasibility stage; however, the National Park Service is part of the project team and could provide input into the design of the E-line to minimize impacts to historic structures and districts. The cumulative projects would have a negligible to minor adverse impact on historic structures and districts. The Ghirardelli Square conversion project would convert office and retail space to hotel accommodations. Exterior alterations would be presented to and approved by the San Francisco Landmarks Preservation Advisory Board as part of the certificate of appropriateness application. Exterior alterations would be designed to have a negligible to minor impact on the historic structures at Ghirardelli Square. Overall cumulative impacts to historic structures and districts from other projects would be short and long term, negligible to minor, and adverse. The preferred alternative would have a moderate beneficial impact on historic structures and districts. The overall cumulative impact to historic structures and districts of past, present, and reasonably foreseeable future projects, in combination with the preferred alternative, would be long term, minor to moderate, and beneficial, primarily due to the rehabilitation of the bleachers and associated facilities beneath the bleachers.

Conclusion. The preferred alternative would result in a long-term, moderate, and beneficial impact to historic structures and districts. The overall cumulative impact to historic structures and districts of past, present, and reasonably foreseeable future projects, in combination with the preferred alternative, would be long term, minor to moderate, and beneficial, primarily due to rehabilitation of the bleachers and the associated facilities beneath the bleachers.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of park resources or values.

Section 106 Summary. The actions proposed under the preferred alternative are consistent with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (1983). The preferred alternative would rehabilitate the bleacher structures and preserve the historic building. The construction work on the bleacher structures would be preserve the cultural landscape and ultimately lead to its rehabilitation or restoration. After applying Advisory Council on Historic Preservation criteria of adverse effect (36 CFR 800.5), the National Park Service determined that the proposed activities of the preferred alternative would have *no adverse effect* to historic structures and districts.

Archeological Resources

Under the preferred alternative, the bleachers and the space beneath the bleachers would undergo rehabilitation. The historic structure would be rehabilitated, drainage problems would be corrected, and cracking and structural damage would be repaired. Although not anticipated, there is the possibility that artifacts related to the building's early construction, debris from the 1906 earthquake, or remains from a previously undocumented historic or prehistoric cultural resource could be uncovered during construction and/or during any earth disturbance. Although it is unlikely that significant intact deposits would be discovered during the proposed project, the possibility remains that previously unknown archeological resources could be affected by the preferred alternative.

During excavation of the landscaped areas, an archeologist would be onsite to watch for any indications of original planting bed configurations and previously unknown historic features. If intact archeological resources are uncovered during construction, work would be halted in the discovery area, the site

secured, and the San Francisco Maritime NHP would consult according to 36 CFR 800.13 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990.

A discovery plan would be prepared prior to any construction activity. This plan would establish procedures and provide guidelines for the treatment of inadvertent discoveries during all ground-disturbing activities associated with the preferred alternative. The formalization of these procedures ensures that all parties involved with the proposed project are familiar with legislated mandates and recommendations for compliance enabling them to respond in a timely and responsible manner. In the event that potentially significant archeological remains are uncovered during the construction process, all work would be temporarily stopped or redirected to another location, if feasible. Work outside the area of the find would be allowed to continue with appropriate monitoring. The resource location would be plotted with appropriate Global Positioning System (GPS) equipment.

In the event of a discovery, the monitor would notify the job foreman that work would be stopped, then would notify the principal investigator of the discovery. The principal investigator would then notify the NPS contact. Within 24 hours of the discovery, an approach to evaluate the archeological resource would be made in consultation with the San Francisco Maritime NHP representative. Archeological resources consisting of intact subsurface deposits indicative of prehistoric or historic period use or features 50 years or greater in age would require more extensive treatment that includes the assessment of significance eligibility to the NRHP.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect archeological resources include the E-line extension project. The E-line extension project is still in the feasibility stage so exact details of the line location are currently unknown. Routing could impact the previously unknown and unrecorded archeological resources if ground-disturbing excavations are required. This project would have a long-term, minor to moderate, adverse impact on archeological resources, depending if previously unknown archeological resources are found along the extension. The cumulative effects of the long-term, minor to moderate, beneficial impacts of the preferred alternative, in combination with the long-term, minor to moderate, adverse impacts from the other reasonably foreseeable project, would result in long-term, minor, adverse impacts to archeological resources.

Conclusion. The preferred alternative would result in a long-term, minor to moderate, beneficial impact to archeological resources, if unknown resources are discovered during the proposed project. The cumulative effects of the long-term, minor to moderate, beneficial impacts of the preferred alternative, in combination with the long-term, minor to moderate, adverse impacts from the other reasonably foreseeable projects, would result in long-term, minor, adverse impacts to archaeological resources.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of park resources or values.

Section 106 Summary. The actions proposed under the preferred alternative are consistent with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (1983). The preferred alternative may result in discovery of previously unknown archeological isolates or intact archeological resources. The rehabilitation work to be completed would follow section 106 and Native American Graves Protection and Repatriation Act of 1990 guidelines. Adverse effects associated with archeological resources can be mitigated by following the Advisory Council on Historic Preservation criteria of adverse effect (36 CFR 800.5).

Museum Collections

Under the preferred alternative, museum collections would be temporarily relocated or otherwise protected during the proposed construction work. Museum exhibits stored in the area below the bleachers could be temporarily moved to other locations. Museum exhibit preparation areas and the active photographic lab areas beneath the bleachers would likely be closed during construction, and any materials stored there would be relocated. The nitrate negative storage freezers would be relocated to an appropriate storage space offsite. Preparation areas could also be temporarily relocated to allow construction activity to continue. The likely areas for storage and work space relocation would be Building E or adjacent rented space. Some murals exist on the walls beneath the bleachers, such as the World War II mural. During construction work, care would be taken to ensure that these artifacts are not damaged. With the implementation of a relocation plan to protect museum collections during the short-term construction period, impacts would be negligible to minor and adverse. Upon completion of the construction activities, water infiltration would be eliminated by waterproofing and soil grouting; additional fire sprinklers would be installed in areas where they do not currently exist; and work spaces would be improved with better HVAC and lighting systems. The amphitheater structure itself would be repaired and areas with falling concrete would be removed to prevent damage to museum collections. Overall, the proposed project would stabilize museum collections and improve museum collection storage and preparation areas. In the long term, the preferred alternative would represent a minor to moderate beneficial impact to museum collections.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect museum collections include the roof, window, and door replacement project and the maritime museum recoating project. Both projects are designed to provide protection to museum collections by improvements to the museum building. The cumulative projects would have a long-term, minor, beneficial impact on museum collections. The cumulative effects of the preferred alternative, in combination with the impacts from other past, present, and reasonably foreseeable projects, would result in short-term, negligible to minor, adverse impacts, and long-term, moderate, beneficial impacts to museum collections.

Conclusion. With the implementation of a relocation plan to protect museum collections during the short-term construction period, impacts would be negligible to minor and adverse. Overall, the preferred alternative would stabilize museum collections and improve museum collection storage and preparation areas. In the long term, this would represent a minor to moderate beneficial impact to museum collections. The cumulative effects of the preferred alternative, in combination with the impacts from other past, present, and reasonably foreseeable projects, would result in short-term, negligible to minor, adverse impacts and long-term, moderate, beneficial impacts to museum collections.

Visitor Use and Experience

The public uses the project area extensively, including the bleachers, the promenade in front of the bleachers, and the lawn areas. As a direct result of the rehabilitation of the amphitheater structure:

- the bleachers would be unavailable for public use for the duration of the project
- the promenade would be closed to vehicles and bicycles for the duration of the project
- the promenade may be occasionally temporarily closed to pedestrians

Permitted special uses (triathlons, marathons, etc.) would continue for the duration of the project to the extent possible allowed by construction.

This project would result in occasional temporary closure of the museum, however, the museum is anticipated to be closed for the duration of the bleacher rehabilitation project due to other projects taking place concurrently (see the following cumulative impacts section for detailed information on museum closure).

Rehabilitation of the amphitheater structure would result in short-term, moderate, adverse impacts due to the unavailability of the bleachers for day-to-day use and for special events; closure of the promenade to vehicles and bicycles; and occasional temporary closure of the promenade to pedestrians. Short-term impacts as a result of these closures would be moderate and adverse. Over the long term, the public would be able to continue to use the bleacher structures. The bleachers and associated facilities would be updated, and the office and work spaces would be universally accessible. Continued use of the amphitheater would be assured for many years to come. The long-term impacts to visitor use and experience would be moderate and beneficial.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect visitor use and experience include the roof, window, and door replacement project scheduled for 2006, and the project to construct and install new museum exhibits. The combination of these two projects would result in closure of the museum building for the duration of the bleacher rehabilitation project, resulting in short-term, minor, adverse impacts. The maritime museum recoating project would result in short-term, negligible, adverse impacts to visitor use and experience due to limited access in active construction areas. The replacement and recoating projects would have no long-term impacts to visitor use and experience. The conversion of retail space to hotel space in Ghirardelli Square would result in short-term, minor, adverse impacts to the public as a result of construction activities, which could require closure of some areas. In the long term, although some retail shops would be closed, a new hotel would be available for public use resulting in long-term, minor, beneficial impacts. The E-line expansion project would create short-term, minor, adverse impacts due to construction activities. Over the long term, having a streetcar line that passes near several areas of high visitor use would result in a moderate beneficial impact. The overall cumulative effect of other past, present, and reasonably foreseeable future projects would be short term, negligible to minor, and adverse, and long term, minor to moderate, and beneficial. The preferred alternative would contribute short-term, moderate, adverse, and long-term, moderate, beneficial impacts to cumulative impacts. Overall cumulative impacts to visitor use and experience would be short term, moderate, and adverse. Over the long term, impacts to the public from cumulative projects would be moderate and beneficial.

Conclusion. Short-term impacts to visitor use and experience from the preferred alternative would be moderate and adverse. Long-term impacts would be moderate and beneficial. The overall cumulative impacts to visitor use and experience would be short term, moderate, and adverse. Over the long term, impacts to the public from cumulative projects would be moderate and beneficial.

Health and Safety

Under the preferred alternative, the amphitheater structure would be rehabilitated with substantial areas of reconstruction. During the reconstruction activities, there is a potential for workers and the public to be injured. Such potential would be minimized through training workers and use of signs, barricades, and fencing to prevent access to work areas by the public. As a result of these mitigation measures, short-term impacts to health and safety would be negligible and adverse.

Over the long term, the rehabilitation would eliminate falling concrete; eliminate water infiltration; improve HVAC, fire suppression, and electrical systems, which would have an overall beneficial impact on the public and worker health and safety. The hazardous materials storage area would be updated to provide adequate storage space. During construction, asbestos materials would be removed from the structure, which would have a beneficial impact to health. The rehabilitation work would result in long-term, moderate, beneficial impacts to park employees and visitor health and safety by eliminating potential health and safety hazards.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect health and safety include the roof, door, and window replacement project; the maritime museum recoating project; the Ghirardelli Square conversion; and the construction of the E-line extension. During the construction period associated with all of these projects, there would be a short-term potential for safety-related impacts to workers and the general public as a result of construction activities. The short-term impacts would be negligible to minor and adverse with the implementation of appropriate safety controls such as barricades and safety training for construction workers. Over the long term, construction would be completed, and for most projects there would be no long-term impacts to health and safety. The E-line represents a potential for longer term safety impacts as a result of accidents involving streetcars and other vehicles or pedestrians. If the route includes a streetcar line along the promenade (which is one of the alternatives under study), there would be an increased potential for accidents to occur, in spite of the projected slow speeds for streetcars in this area as a result of pedestrians and bicyclists on the promenade. Long-term impacts would range from no impact to negligible and adverse. The preferred alternative would contribute short-term, negligible, adverse, and long-term, moderate, beneficial impacts. The overall cumulative impacts of the preferred alternative, combined with other past, present, and reasonably foreseeable projects, would be short term, negligible to minor, and adverse, and long term, moderate, and beneficial.

Conclusion. Short-term impacts of the preferred alternative to public and construction worker's health and safety from construction activities would be negligible and adverse. Long-term impacts from the preferred alternative would be moderate and beneficial to park employee and public health and safety. The preferred alternative, combined with other past, present, and reasonably foreseeable projects, would result in short-term negligible to minor, and adverse, long-term, moderate, and beneficial impacts.

Park Operations

Short-term impacts would result to park operations from relocating outside of the construction area. The park is located in the urban area of San Francisco's Fisherman's Wharf. Space of any kind is at a premium. Funding is included in the project for temporary relocation of park operations (offices and shops) impacted by the project. However, if the facilities were temporarily relocated far from the park, it would result in reduced operational efficiency. Short-term impacts to park operations would be minor and adverse. Long-term impacts to park operations would be moderate and beneficial, as work space, electrical, and HVAC system improvements would improve overall efficiency. The park would save approximately $40,000 annually that is currently expended on labor, equipment, and materials to maintain the crumbling, severely deteriorated structure (NPS 2004).

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect park operations include the roof, door, and window replacement project and the maritime museum recoating project. Both projects would impact park work spaces in the short term. The first project would result in short-term closure of the museum building. In addition, park personnel would be required to oversee the rehabilitation projects and install temporary barricades and notices of closure. The cumulative projects would result in short-term, minor, adverse impacts to park operations. Over the

long term, there would be no impacts to park operations. The cumulative effect of the preferred alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, minor, and adverse. There would be no long-term cumulative impacts.

Conclusion. Short-term impacts to park operations from the preferred alternative would be minor and adverse. Long-term impacts to park operations would be moderate and beneficial. The cumulative effect of the preferred alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, minor, and adverse. There would be no long-term cumulative impacts.

Socioeconomics

During construction, the bleachers would be unavailable for use by school groups, and the space beneath the bleachers would not be available for use by the San Francisco Senior Citizen's Center. The National Park Service is committed to working with the displaced groups to minimize their inconvenience to the greatest extent possible. The National Park Service would notify the school of the project and school groups may be able to gather at the pier rather than at the bleachers. The San Francisco Senior Citizen's Center would be notified of the project and would be responsible for arranging an alternative location for their operations and events for the duration of construction. Construction workers would provide negligible beneficial contributions to the local economy by spending in the area. As a result, short-term impacts would be minor to moderate and adverse. In the long term, school groups, senior citizens, and the public would be able to continue to use the bleacher structures as in the past, resulting in no long-term socioeconomic impacts. Since the promenade would be closed to bicycles for the duration of the project, a short-term, minor to moderate, adverse impact to bicycle rental businesses in the vicinity of San Francisco NHP would be anticipated. Overall, impacts to socioeconomics from the preferred alternative would be short term, minor to moderate, and adverse. There would be no long-term impacts to socioeconomics.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to have a measurable, short- and long-term effect on the socioeconomics of the area include the roof, window, and door replacement project scheduled for 2006; the project to construct and install new museum exhibits; and the Ghirardelli Square conversion. The combination of the two park projects would result in closure of the museum building for the duration of the bleacher rehabilitation project, rendering the space unavailable for rental. The revenue stream to the park's cooperating association from the rental of the museum and surrounding area could be unavailable for up to two years. With rental rates ranging from $2,700 to $5,000, there would be a noticeable reduction of rental income, resulting in short-term, minor to moderate, adverse impacts. The new hotel space in Ghirardelli Square would provide additional jobs and would bring additional tourists and business people who would stay in the area and spend money. The long-term impacts to socioeconomics would be minor to moderate and beneficial. The other past, present, and reasonably foreseeable future projects, in conjunction with the Ghirardelli Square conversion, would have a short-term, negligible to minor, beneficial impact to area socioeconomics during the construction period from construction businesses and workers spending in the area. The preferred alternative would contribute short-term, minor to moderate, adverse impacts and no long-term impacts. The overall cumulative effect of the no-action alternative, combined with other past, present, and reasonably foreseeable future projects, would be short term, negligible to minor, and adverse. There would be no long-term cumulative impacts.

Conclusion. The short-term impacts to socioeconomics from the preferred alternative would be minor to moderate and adverse. There would be no long-term socioeconomic impacts. The overall cumulative effects of the no-action alternative, combined with other past, present, and reasonably foreseeable future

projects, would be short term, negligible to minor, and adverse. There would be no long-term cumulative impacts.

Transportation

Under the preferred alternative, short-term impacts to transportation would include closure of the promenade to bicycle traffic and vehicle parking. Emergency vehicles would likely not have access to the promenade during the construction period because only a limited walkway would be open as a result of construction fencing and staging areas. The National Park Service would work with local emergency agencies to determine alternate emergency access routes. In addition, the construction activities and associated fencing of the project area would impact public access to the Beach Street bus stop due to temporary relocation.

Removal of construction debris by truck would increase large vehicle traffic in this tourist attraction area, potentially adding to traffic congestion. The number of vehicles associated with construction related activities would be anticipated to contribute only minimally to any increase in the number of average daily trips, and any increase would be negligible against existing background traffic conditions. During construction, the flow of pedestrian and vehicular traffic along adjacent streets could be temporarily restricted. Pedestrians and drivers may experience delays. Every effort would be made to maintain the flow of pedestrian and vehicular traffic and minimize delays as much as possible. Surrounding businesses would be alerted as soon as possible when delays can be anticipated, and if delays would be longer than normal. Short-term adverse impacts could range from minor to moderate.

Upon completion of the project, parking currently available on the promenade for park employees and other users would no longer exist, however additional parking is available in NPS parking spaces in the lot on the north side of Beach Street, as well as on Jefferson Street and Van Ness Avenue. Long-term impacts would be negligible and adverse.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect transportation include conversion of retail space to hotel space within Ghirardelli Square and the E-line extension. Should these projects occur simultaneously with the bleacher rehabilitation project, the presence of large construction vehicles and heavy equipment operation would be increased, potentially causing traffic congestion. The increased traffic during construction would cause a short-term, minor, adverse impact to transportation.

Upon completion of construction of the E-line extension, access to the San Francisco Maritime NHP site and other areas in the vicinity would be provided by historic streetcars. The long-term impacts to transportation as a result of the E-line extension would be moderate and beneficial.

The preferred alternative would contribute short-term, negligible to minor, adverse, and long-term, negligible, adverse impacts. The overall cumulative impacts from the preferred alternative, in combination with past, present, and reasonably foreseeable future projects, would be short term, minor, and adverse, and long term, moderate, and beneficial.

Conclusion. Impacts to transportation from the preferred alternative would be short term, minor to moderate, and adverse, and long term, negligible, and adverse. The overall cumulative impacts from the preferred alternative, in combination with past, present, and reasonably foreseeable future projects, would be short term, moderate, and adverse, and long term, moderate, and beneficial.

Energy Requirements and Conservation Potential

During construction activities, energy requirements would increase as a result of the tolls and equipment being used, and fuels needed in transportation of equipment and workers to and from the construction site. Such increases would be short term and the impacts would be negligible and adverse. Rehabilitation of the amphitheater structure under the preferred alternative would provide an opportunity to use recycled materials and the latest technology to minimize energy demands of the facility, and reduce energy usage to sustain the deteriorated structure. The replaced skylights would be more energy efficient than the existing ones. The HVAC and electrical system upgrades would be designed to reduce energy consumption. The long-term benefits of the preferred alternative on energy consumption would be minor.

Cumulative Impacts. Past, present, and reasonably foreseeable future projects with the potential to affect energy requirements and conservation potential include the roof, door, and window replacement project scheduled for 2006, and the maritime museum recoating project. Both of these projects would require energy expenditures in the short term, resulting in negligible adverse impacts, and long-term, negligible to minor, beneficial impacts due to the reduction of future maintenance requirements and the energy efficiency of new doors and windows. The preferred alternative would contribute negligible adverse impacts in the short term, and minor beneficial impacts in the long term. The overall cumulative impacts from past, present, and reasonably foreseeable future projects, in conjunction with the no-action alternative, would be short term, negligible to minor, and adverse, and long term, negligible to minor, and beneficial.

Conclusion. Short-term impacts to energy requirements and conservation potential from the energy requirements for rehabilitation of the amphitheater structure would be negligible and adverse; long-term impacts would be beneficial and minor. The overall cumulative impacts from past, present, and reasonably foreseeable future projects, in conjunction with the no-action alternative, would be short term, negligible to minor, and adverse, and long term, negligible to minor, and beneficial.

CONSULTATION AND COORDINATION

SCOPING

Scoping is the effort to involve agencies and the general public in determining the scope of issues to be addressed in the environmental assessment. Among other tasks, scoping determines important issues and eliminates issues not important; allocates assignments among the interdisciplinary team members and/or other participating agencies; identifies related projects and associated documents; identifies other permits, surveys, consultations, etc., required by other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental assessment for public review and comment before a final decision is made. Scoping includes any interested agency, or any agency with jurisdiction by law or expertise (including the Advisory Council on Historic Preservation, the California SHPO, and American Indian tribes) to obtain early input.

Staff of San Francisco Maritime NHP and resource professionals of the National Park Service-Denver Service Center, conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the preferred alternative to other planning efforts at the park.

A press release initiating public scoping and describing the preferred alternative was issued October 21, 2005 (appendix A). Comments were solicited during the public scoping period. Five comments were received. Letters were sent to other agencies on October 24, 2005 (see "Consultation and Coordination," appendix B).

This environmental assessment will be available to the public on both the park Web site and on the NPS Planning, Environment, and Public Comment (PEPC) Web site.

COMPLIANCE WITH FEDERAL AND STATE REGULATIONS

For the no-action alternative, no permits would be required.

The National Historic Preservation Act, as amended (16 USC 470 *et seq*.), NEPA, National Park Service Organic Act, NPS *Management Policies* (2001), Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001), and Director's Order – 28: *Cultural Resources Management Guideline* require the consideration of impacts on cultural resources, either listed in or eligible to be listed in, the NRHP. The National Park Service has contacted the California SHPO and discussed the proposed rehabilitation of the amphitheater structure. Copies of the value analysis and limited scope historic structure report have been sent to the SHPO for review (January 2006). This environmental assessment will be forwarded to the California SHPO for review and comment.

In accordance with section 7(c) of the Endangered Species Act of 1973, as amended (16 USC 1531 *et seq*.), it is the responsibility of the federal agency proposing the action (in this case the National Park Service) to determine whether the preferred alternative would adversely affect any listed species or designated critical habitat. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service were notified and asked to provide a list of potential threatened, endangered, and special-status

species in the vicinity of the proposed project. The National Marine Fisheries Service responded that given the scope of the project they did not believe there would be any impacts to special-status species (appendix B). The U. S. Fish and Wildlife Service provided a Web site link to a species list. Based on the Web site species list, there are no special-status species that would be impacted by the project activities.

The Coastal Zone Management Act of 1972 established a voluntary national program within the Department of Commerce to encourage coastal states to develop and implement coastal zone management plans. In order to be eligible for federal approval, each state's plan was required to define boundaries of the coastal zone, to identify uses of the area to be regulated by the state, the mechanism (criteria, standards, or regulations) for controlling such uses, and broad guidelines for priorities of uses within the coastal zone. In addition, the 1972 law established a system of criteria and standards requiring that federal actions be conducted in a manner consistent with the federally approved plan. The standard for determining consistency varied depending on whether the federal action involved a permit, license, financial assistance, or a federally authorized activity (USFWS 2005). A Costal Zone Management Act consistency determination would be required for this project. Dialogue between the park and the San Francisco Bay Conservation and Development Commission is ongoing.

LIST OF NATIONAL PARK SERVICE CONTACTS AND DOCUMENT PREPARERS

This environmental assessment was prepared by engineering-environmental Management, Inc., under the direction of the National Park Service. Denver Service Center and San Francisco Maritime National Historical Park staff provided invaluable assistance in the development and technical review of this environmental assessment. National Park Service staff that provided information include:

San Francisco Maritime National Historical Park

Robbyn Jackson	Chief, Cultural Resources and Museum Management
Stephen Canright	Curator, Maritime History
Rob Kier	Facility Supervisor
Steve Hyman	Historic Preservation Specialist
Lynn Cullivan	Management Analyst

National Park Service – Denver Service Center

Greg Cody	Cultural Resource Compliance Specialist
Elaine Rideout	Natural Resource Compliance Specialist

The preparers of this document are:

engineering-environmental Management, Inc.

Anne Baldrige	Environmental Conservation/Planning Project Manager
Dr. Judy Berryman	Staff Environmental Professional
Dale Cheever	Senior Environmental Professional
Wanda Gray Lafferty	Technical Publications Specialist
Jim Von Loh	Natural Resources Specialist
Schelle Frye	Environmental Planner

REFERENCES

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BSA Architects (BSA)

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City and County of San Francisco Planning Department

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Davis Langdon

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Federal Emergency Management Administration (FEMA)

2005 FEMA Map Search Web site found at: http://store.msc.fema.gov/webapp/wsc/stores/servlet/FemaWelcomeView?storeID=10001&langId=-1

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National Park Service (NPS)

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2001a Management Policies.

2001b Cultural Landscape Inventory, Aquatic Park, San Francisco Maritime National Historical Park.

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Wilbur Smith Associates in Association with EIP Associates, URS Corporation, BMS Design Group, LTK Engineering Services
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APPENDIX A: NATIONAL PARK SERVICE PRESS RELEASE

National Park Service
U.S. Department of the Interior

San Francisco Maritime
National Historical Park

Building E, Fort Mason,
San Francisco, CA 94123

415-561-7000 phone
415-556-1624 fax

San Francisco Maritime News Release

For Immediate Release
Contact: Lynn Cullivan
415-561-7006

PUBLIC COMMENTS SOUGHT ON PROPOSED REHABILITATION PROJECT FOR THE AMPHITHEATER IN AQUATIC PARK NATIONAL HISTORIC LANDMARK DISTRICT

San Francisco, CA – San Francisco Maritime National Historical Park officials today announced a proposed rehabilitation of the amphitheater within the Aquatic Park National Historic Landmark District. This project would entail repair, and in some cases substantial reconstruction, of the 1939 structure's bleachers and underground workspaces. The rehabilitation, projected to begin in the fall of 2007, would close the amphitheater bleachers, and much of the grassy area immediately adjacent, to the public for 12-18 months.

Due to age, water intrusion, and general weathering/exposure within its sea-salt environment, much of the poured-cement structure has deteriorated. A portion of the bleachers is currently being supported by temporary shoring. Repairs would include: upgrades for increased accessibility, bringing mechanical and electrical systems up to building code requirements, rehabilitation of an historic first aid station, and skylight replacement.

The amphitheater rehabilitation is the second, and more substantial, phase of repairs scheduled for this National Historic Landmark building. The first phase, slated to begin in June, 2006, focuses on the structure's "topsides." Tasks include patching the roof (and replacing its contemporary coating with period tiles), and fixing leaking windows.

"Besides being one of the West Coast's finest examples of Art Deco architecture, the Bathhouse and bleachers are integral to one of San Francisco's most popular recreational facilities," said

-- more --

Park Superintendent Kate Richardson. "It's not often that you get a chance to preserve national history, local culture, and a public open space all at the same time," Richardson added.

An early step in the National Park Service planning process is to involve the public. Park managers, therefore, are soliciting comments on the concerns and issues to be addressed in an Environmental Assessment (EA) that is being prepared for this project. The EA should be available for public review in late 2005.

The Aquatic Park bathhouse, which now houses the Park's Maritime Museum, is a nationally significant example of the "streamline moderne" style. The bleachers, flanking either side of the bathhouse, were designed for spectators watching swimming and boating events in the protected Lagoon. The Bathhouse, and associated structures, were nominated to the National Register of Historic Places in 1984 and designed a National Historic Landmark in 1987.

To assist San Francisco Maritime National Historical Park with the Aquatic Park Amphitheater Rehabilitation Project, the public is invited to comment on the project proposal and any related issues or concerns they may have.

For more information, please call (415) 561-7006 weekdays, 9:00 a.m. to 5:00 p.m. Pacific Daylight Time; or write to Management Assistant, San Francisco National Historical Park, Attention: Aquatic Park Amphitheater Rehabilitation, Building E, Fort Mason Center, San Francisco, CA 94123 ; or e-mail SAFR_Planning@nps.gov.

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10/21/05

APPENDIX B: CONSULTATION AND COORDINATION LETTERS

United States Department of the Interior
NATIONAL PARK SERVICE
SAN FRANCISCO MARITIME NATIONAL HISTORICAL PARK
BUILDING E, LOWER FORT MASON, ROOM 265
SAN FRANCISCO, CALIFORNIA 94123

IN REPLY REFER TO:

D18 (SAFR-Superintendent)

October 24, 2005

To whom it may concern:

The National Park Service at San Francisco Maritime National Historical Park is seeking comments regarding a proposed project involving rehabilitation of the amphitheater within the Aquatic Park National Historic Landmark District. This project would entail repair, and in some cases substantial reconstruction, of the 1939 structure's bleachers and underground workspaces. The rehabilitation, projected to begin in the fall of 2007, would close the amphitheater bleachers, and much of the grassy area immediately adjacent, to the public for 12-18 months.

Due to age, water intrusion, and general weathering/exposure within its sea-salt environment, much of the poured-cement structure has deteriorated. A portion of the bleachers is currently being supported by temporary shoring. Repairs would include: upgrades for increased accessibility, bringing mechanical and electrical systems up to building code requirements, rehabilitation of an historic first aid station, and skylight replacement.

The amphitheater rehabilitation is the second, and more substantial, phase of repairs scheduled for this National Historic Landmark building. The first phase, slated to begin in June, 2006, focuses on the structure's "topsides." Tasks include patching the roof (and replacing its contemporary coating with period tiles), and fixing leaking windows.

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An early step in the National Park Service planning process is to involve the public. Park managers, therefore, are soliciting comments on the concerns and issues to be addressed in an Environmental Assessment (EA) that is being prepared for this project. The EA should be available for public review in late 2005.

For more information or to provide comments, please call (415) 561-7006 weekdays, 9:00 a.m. to 5:00 p.m. Pacific Daylight Time; or write to Management Assistant, San Francisco National Historical Park, Attention: Aquatic Park Amphitheater Rehabilitation, Building E, Fort Mason Center, San Francisco, CA 94123; or e-mail SAFR_Planning@nps.gov.

Sincerely,

Kate Richardson

Kate Richardson
Superintendent

United States Department of the Interior

NATIONAL PARK SERVICE
SAN FRANCISCO MARITIME NATIONAL HISTORICAL PARK
BUILDING E, LOWER FORT MASON, ROOM 265
SAN FRANCISCO, CALIFORNIA 94123

IN REPLY REFER TO

H30 (SAFR)

Feb. 8, 2005

Milford Wayne Donaldson
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks & Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

Dear Mr. Donaldson:

The National Park Service (NPS) proposes to rehabilitate the amphitheater (also known as the bleachers) within Aquatic Park National Historic Landmark District, San Francisco Maritime National Historical Park. The amphitheater is a significant feature of the Aquatic Park Bathhouse, also known as the Maritime Museum Building, and is a contributing element of the landmark district.

Due to the age of the amphitheater (ca. 1936-1939), water intrusion, weathering, and exposure to its sea-salt environment, the structure is severely deteriorated and increasingly unsafe for day-to-day use by park visitors and school groups, as well as for viewing the popular Fourth of July fireworks display. In addition, the interior of the east bleacher provides workspaces for park employees and spaces under the center and western most bleachers are used by the San Francisco Senior Center. Deterioration of the structure has resulted in falling concrete and created unsafe conditions for both park staff and senior citizens.

A recent condition assessment determined the amphitheater is unsafe and can no longer be maintained by piece-meal repairs or stopgap measures. Rehabilitation of the amphitheater would entail removal and replacement of failed concrete and rebar, installation of a new underground drain and structure waterproofing system, hazardous material removal, and replacement of skylights. Improved ADA accessibility and upgrades for mechanical and electrical systems would also be provided.

An environmental assessment (EA) will be prepared for the proposed rehabilitation, to meet the requirements of the National Environmental Policy Act (NEPA). The process and documentation required for NEPA and preparation of the EA will be used to comply

with §106 of the National Historic Preservation Act. In accordance with section 800.8(c) of the Advisory Council on Historic Preservation's regulations (36 CFR 800), *Use of the NEPA Process for Section 106 Purposes*, I am notifying your office in advance of the NPS's intention to use the EA to meet its obligations under §106.

The National Park Service will hold a public scoping meeting regarding the proposed rehabilitation in the near future. The date, time, and location of the meeting will be provided to you and announced in the local media. In addition, I will be extending an invitation for you or a member or your staff to attend an upcoming value analysis for the project.

If you should have any questions, or require further information at this time, please contact either me at (415) 561-7002 or Robbyn Jackson, the park's Chief of Cultural Resources and Museum Management, at (415) 561-7019.

Sincerely,

Kate Richardson
Superintendent, San Francisco Maritime National Historical Park

cc:
Jane Crisler
Advisory Council on Historic Preservation
12136 W. Bayaud Avenue
Suite 330
Lakewood, CO 80228

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-6528

August 12, 2005

In Response Reply To:
151422SWR05SR00571:DPW

Elaine Rideout
U.S. Department of the Interior
National Park Service
12795 W. Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

Dear Ms. Rideout:

Thank you for your letter of July 14, 2005, regarding the presence of Federally listed (or proposed for listing) threatened or endangered species or critical habitat that may be affected by the U.S. Department of Interior National Park Service's proposed repair of the amphitheater structures at the San Francisco Maritime National Historic Park, located adjacent to central San Francisco Bay, in the City and County of San Francisco, California.

Available information indicates that the following listed species (Evolutionarily Significant Units) occur within central San Francisco Bay:

Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*)
endangered (January 4, 1994, 59 FR 440)
critical habitat (June 16, 1993, 58 FR 33212)
Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*)
threatened (September 16, 1999, 64 FR 50394)
proposed critical habitat (December 10, 2004, 69 FR 71880)
Central Valley steelhead (*Oncorhynchus mykiss*)
threatened (March 19, 1998, 63 FR 13347)
proposed critical habitat (December 10, 2004, 69 FR 71880)
Central California Coast steelhead (*Oncorhynchus mykiss*)
threatened (August 18, 1997, 62 FR 43937)
proposed critical habitat (December 10, 2004, 69 FR 71880)

As there is no shoreline or in-water work associated with the proposed activities, NOAA's National Marine Fisheries Service has determined that the project should have no effect on listed salmonids that may be present in adjacent waters at the time of construction or on their critical habitat.

The U.S. Fish and Wildlife Service (USFWS) may have listed species or critical habitat under its jurisdiction in the project area. Please contact Mr. Harry Mossman at USFWS, 2800 Cottage Way, W-2605, Sacramento, California 95825, or (916) 414-6600, regarding the presence of listed species or critical habitat under USFWS jurisdiction that might be affected by your project.

If you have questions concerning these comments, please contact David Woodbury at (707) 575-6088.

Sincerely,

Dick Butler
Northern California Supervisor
Protected Resources Division

cc: Philip S. Hill, NMFS, Long Beach, California

Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
SAN FRANCISCO NORTH (466C)
U.S.G.S. 7 1/2 Minute Quad

Database Last Updated: August 22, 2005

Document Number: 050921100324

Listed Species

Invertebrates

Haliotes sorenseni - white abalone (E)

Icaricia icarioides missionensis - mission blue butterfly (E)

Incisalia mossii bayensis - San Bruno elfin butterfly (E)

Fish

Eucyclogobius newberryi - tidewater goby (E)

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus kisutch - coho salmon - central CA coast (E)

Oncorhynchus kisutch - Critical habitat, coho salmon - central CA coast (X)

Oncorhynchus mykiss - Central California Coastal steelhead (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - Critical habitat, winter-run chinook salmon (X)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Rana aurora draytonii - California red-legged frog (T)

Birds

Charadrius alexandrinus nivosus - western snowy plover (T)

Diomedea albatrus - short-tailed albatross (E)

Haliaeetus leucocephalus - bald eagle (T)

Pelecanus occidentalis californicus - California brown pelican (E)

Sterna antillarum (=albifrons) browni - California least tern (E)

Mammals

Arctocephalus townsendi - Guadalupe fur seal (T)

Balaenoptera borealis - sei whale (E)

Balaenoptera musculus - blue whale (E)

Balaenoptera physalus - finback (=fin) whale (E)

Eubalaena glacialis - right whale (E)

Eumetopias jubatus - Critical Habitat, Steller (=northern) sea-lion (X)

Eumetopias jubatus - Steller (=northern) sea-lion (T)

Physeter catodon (=macrocephalus) - sperm whale (E)

Plants

Arctostaphylos hookeri ssp. ravenii - Presidio (=Raven's) manzanita (E)

Clarkia franciscana - Presidio clarkia (E)

Hesperolinon congestum - Marin dwarf-flax (=western flax) (T)

Lessingia germanorum - San Francisco lessingia (E)

Proposed Species

Fish

Acipenser medirostris - green sturgeon (P)

Oncorhynchus tshawytscha - Critical Habitat, Central Valley spring-run chinook (PX)

Amphibians

Rana aurora draytonii - Critical habitat, California red-legged frog (PX)

Candidate Species

Invertebrates

Haliotes cracherodii - black abalone (C)

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Oncorhynchus tshawytscha - Critical habitat, Central Valley fall/late fall-run chinook (C)

Species of Concern

Invertebrates

Adela oplerella - Opler's longhorn moth (SC)

Cicindela hirticollis gravida - sandy beach tiger beetle (SC)

Coelus globosus - globose dune beetle (SC)

*Hydrochara ricksecker*i - Ricksecker's water scavenger beetle (SC)

Lichnanthe ursina - bumblebee scarab beetle (SC)

Fish

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Rana boylii - foothill yellow-legged frog (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Amphispiza belli belli - Bell's sage sparrow (SC)

Arenaria melanocephala - black turnstone (SC)

Athene cunicularia hypugaea - western burrowing owl (SC)

Buteo regalis - ferruginous hawk (SC)

Calidris canutus - red knot (SC)

Chaetura vauxi - Vaux's swift (SC)

Cypseloides niger - black swift (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Geothlypis trichas sinuosa - saltmarsh common yellowthroat (SC)

Haematopus bachmani - black oystercatcher (SC)

Histrionicus histrionicus - Harlequin duck (SC)

Lanius ludovicianus - loggerhead shrike (SC)

Laterallus jamaicensis coturniculus - black rail (CA)

Limosa fedoa - marbled godwit (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Numenius phaeopus - whimbrel (SC)

Oceanodroma homochroa - ashy storm-petrel (SC)

Riparia riparia - bank swallow (CA)

Rynchops niger - black skimmer (SC)

Selasphorus rufus - rufous hummingbird (SC)

Selasphorus sasin - Allen's hummingbird (SC)

Sterna elegans - elegant tern (SC)

Mammals

Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)

Eschrichtius robustus - gray whale (D)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis evotis - long-eared myotis bat (SC)

Myotis thysanodes - fringed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Neotoma fuscipes annectens - San Francisco dusky-footed woodrat (SC)

Zapus trinotatus orarius - Point Reyes jumping mouse (SC)

Plants

Abronia umbellata ssp. umbellata - pink sand-verbena (SLC)

Arabis blepharophylla - coast rock-cress (SLC)

Astragalus nuttallii var. virgatus - Nuttall's milk-vetch (SLC)

Atriplex californica - California saltbush (SLC)

Castilleja affinis spp. affinis - Coast Indian paintbrush (SLC)

Castilleja ambigua ssp. ambigua - salt marsh owl's clover (=johnny-nip) (SLC)

Castilleja exserrta ssp. latifolia - purple owl's-clover (=wideleaf Indian paintbrush) (SLC)

Chenopodium californicum - California goosefoot (SLC)

Chorizanthe cuspidata var. cuspidata - San Francisco Bay spineflower (SC)

Cirsium andrewsii - Franciscan thistle (SC)

Clarkia davyi - Davy's clarkia (SLC)

Croton californicus - California croton (SLC)

Eriogonum caninum - Tiburon buckwheat (SLC)

Erysimum franciscanum - San Francisco wallflower (SC)

Gilia capitata ssp. chamissonis - San Francisco (=bluehead, Chamisso's, dune) gilia (SC)

Grindelia hirsutula var. maritima - San Francisco gumplant (SC)

Navarretia squarrosa - skunkbush (SLC)

Orobanche californica ssp. californica - California broomrape (SLC)

Piperia elegans - coast (=elegant) rein-orchid (=piperia) (SLC)

Plagiobothrys chorisianus var chorisianus - Choris's (=artist's) popcorn-flower (SLC)

Silene verecunda ssp. verecunda - Mission Delores (=San Francisco) campion (SC)

Spartina foliosa - Pacific cordgrass (=California cordgrass) (SLC)

Tanacetum camphoratum - dune (=camphor) tansy (SC)

Triphysaria floribunda - San Francisco owl's-clover (SC)

Triquetrella californica - California triquetrella moss (SLC)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
- *Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (CA) Listed by the State of California but not by the Fish & Wildlife Service.
- (D) *Delisted* - Species will be monitored for 5 years.
- (SC) *Species of Concern*/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.
- (X) *Critical Habitat* designated for this species.

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game Wildlife and Habitat Data Analysis Branch for official information about these species.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compen-sates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be December 20, 2005.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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27 February 2006

Reply To: NPS050214K

Kate Richardson
Superintendent
National Park Service
San Francisco Maritime National Historical Park
Building E, Lower Fort Mason, Room 265
San Francisco, CA 94123

Re: NHPA Section 106 Review Process, Rehabilitation of Amphitheater (Bleachers) within Aquatic Park National Historic Landmark, San Francisco, San Francisco County, CA

Dear Ms. Richardson:

Thank you for your letter of 17 January 2006, requesting my comment pursuant to the National Historic Preservation Act and the implementing regulations codified at 36 CFR 800 with regards to the above undertaking. You are requesting that I concur with your determination that the APE for this undertaking is adequate and requesting a preliminary review of your approach and direction on this project.

As I presently understand it, the undertaking is to rehabilitate the amphitheater (also known as the bleachers) within Aquatic Park National Historic Landmark District, San Francisco Maritime National Historical Park. Rehabilitation would involve removal and replacement of failed concrete and rebar, installation of a new underground drain and structure waterproofing system, hazardous material removal, and replacement of skylights. Improved ADA accessibility and upgrades for mechanical and electrical systems would also be provided.

The APE for the project starts at the west edge of the western stairs and continues to roughly 15 feet of the eastern edge of the East Bleachers, to the curb of Beach Street on the south and to the water's edge on the north side, as shown on the APE map enclosed with your letter. I find this satisfactory pursuant to 36 CFR 800.16(d).

As for my initial review, the narrative, plans, and Value Analysis Study appear to be mindful of an approach that respects the historic fabric and conforms to the *Secretary of Interior Standards for the Treatment of Historic Properties*. However, the drawings outlining the scope and detailing the repairs are lacking. More detailed comments are offered below:

General Note #2: "Retain texture of poured concrete form work in the unfinished spaces where possible."

- Define where unfinished spaces area and reasons why achieving matching texture would not be possible.

The narrative refers to the installation of a sprinkler system but no sprinkler drawings have been submitted.

- Include sprinkler documents and any mechanical drawing sets in the next submission.

Drawing A2.1.1 dated 5/23/06 and R2.1.1 dated 6/20/05 appear to be similar to design drawings although A2.1.1 claims to be the existing condition drawing. This is true of the whole A series.

- Clarify the distinction between the A series drawings and the R series drawings.

There is no description of existing or proposed interior lighting despite response to Ed Nieto's comment number 1.

- Existing original fixtures should be retained and repaired. Replacement lighting fixtures should match original fixtures as closely as possible.

No historic photos are provided in the HSR in contradiction to response to David Snow's comment # 3.

- Provide available historic photographs with the next submission.

Trung Nguyen's comment 4 points out that the existing recent coating needs to be identified. The response is that the original specifications have been reviewed. The Drawing C-1 dated 6-98 is included in the HSR. It details a Broadcast Overlay Section that appears to coat the entire bleacher desk with an aggregate-like finish. This would be substantially different from the original appearance. Does this project propose to remove all of the aggregate-like finish on the bleachers, or to cover with new concrete finish?

- Provide additional images documenting any differences between recent coatings and original finishes, and any plans to completely remove aggregate coating or cover with new material.

At this time, I am able to offer a conditional finding of "No Adverse Effect," until the final plans are submitted.

Thank you for considering historic properties as part of you project planning. If you have any questions, please contact Amanda Blosser of my staff at (916) 653-9010 or e-mail at ablosser@parks.ca.gov

Sincerely,

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:ab

As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. Administration.